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No. 11.

FIBROSIS UTERI.¹

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Fibrosis uteri is a subject that has been much overlooked by the specialist and general practitioner. Moreover, it has been much neglected by many writers. Bland Sutton, Dudley, Bandler, Rabinovitz, Chayee and a few others have dealt with the subject. But the more my attention has been brought to bear upon it, the more I have found reason to think it is more general than usually supposed. In the first place, let me state here, once and for all, with great vehemence, that excessive and frequent menstruation about the climacteric always has a pathologic basis. So often have I heard even medical men state that it is not unnatural for a woman during her menopause to have excessive haemorrhages. This is quite wrong, and by careful observation a definite cause can be found. Amongst the most frequent of these causes is this very subject which I now discuss, *fibrosis uteri*.

What are the symptoms? Only uterine bleeding, frequently excessive, distressing and incurable. There is no alteration in appearance of the cervix. There is nothing to be felt on palpation. A normal-sized uterus, not necessarily displaced, not enlarged, not fixed. Curettage is carried out for investigation, and more often than not an atrophic endometrium is revealed, producing a negative result. In fact, everything seems to be normal. It is proved that she has no malignant disease; but she is no better. The bleeding continues, and he who has performed curettage is not in favour. Then other advice is sought, and he in turn curettes with also a negative result, and the patient still bleeds. After several applications of the curette she at last drifts to someone who recognizes the possibility of *fibrosis uteri*, and the surgeon is now faced with the difficulty that there is no method of diagnosis, except the negative result of medicinal and surgical treatment. True, in some cases, a rapid section of cervix may be made, and fibrosis of the cervix be demonstrated by the microscope. With such cases it is easy to give a verdict. The woman has reached her menopause. The uterus is physiologically inactive, but still pathologically involved; therefore, the wise man advises that a sub-total hysterectomy should be done. This is a simple matter of half-an-hour or forty minutes, producing no shock. The patient is out of bed in a fortnight, and at best, after months or years of previous trouble, she is happy.

Now, is there any alternative treatment? Drugs? There is not one in the whole pharmacopœia that

has the effect of reducing the haemorrhage. Electricity is perfectly useless, as I have learnt to my cost. Is there any milder surgical procedure? It is suggested to tie the uterine arteries, with absolutely futile result, as the ovarian blood supply is so good that the uterus will bleed just as much as ever. No, there is nothing for it but sub-total hysterectomy. Moreover, the removal of the *corpus uteri* must be complete. Let me warn you to leave no fragment of the body. The first case I did was on a young woman, 28 years of age, who had been curetted several times, and who had devoured an infinity of drugs, with the result that she bled frequently from any cause, and always profusely. I then knew very little about the condition, but could see no other way of dealing with it but removing the *corpus uteri*. This I did; but I was conscious that I cut a little high above the cervix, and left a fragment of the corpus, and though her bleeding was reduced, she still bled to a certain extent after coitus.

Later, I found that Sir Bland Sutton gives a warning against this very mistake; he realized that only a small fragment of the body left was enough to maintain haemorrhage. As yet I have never seen any bleeding from the cervix alone, and in all cases in which the body had been completely removed, the bleeding had ceased. Now Bland Sutton, in his last book, states that all uteri so involved with fibrosis are larger than normal. Not one of my earliest cases have shown any enlargement; on the contrary, they have appeared smaller. This is just as one would expect in the atrophy of genital organs after the menopause. This has been my regular experience until the last case on which I operated. The uterus was distinctly enlarged. You can see the enlarged specimen and compare it with a few of those I had done previously. I would also like to show you a specimen of a uterus that I removed for a fibroid in the anterior wall and a condition of fibrosis in the posterior wall. This is unique in my experience. In all other cases I have found fibrosis only, and no signs of fibroids at all.

Of course, I realize that there are some surgeons who might prefer to do a vaginal hysterectomy, and leave the ovaries *in situ*. Those who prefer this method may adopt it; but long ago a vaginal hysterectomy has fallen out of favour, so far as I am concerned. When a pathological uterus is being investigated, I prefer to study its environments by sight, to deal with any other pathological condition that may be present in its environment.

Again, the stumps of the adnexa can be more carefully covered by peritoneum by the abdominal route than the vaginal, and, moreover, a uretero-vaginal fistula should never occur when an abdominal route is selected. There are other surgeons who have preferred to remove both ovaries, as they maintain that all bleeding of the uterus is controlled by ovarian

¹ Read at a Meeting of the Victorian Branch of the British Medical Association on July 5, 1916.

secretion. My comment on this method of attack is that it is far more drastic than removal of the *corpus uteri*, and, moreover, I would be very nervous of being able to produce a cure.¹

Now what is *fibrosis uteri*?

In this very difficult problem I have not relied upon my own observation, and I have had the able assistance of Dr. Leo Doyle, Pathologist at St. Vincent's Hospital, whose notes on aetiology and pathology of this subject I submit herewith *in extenso*. He says:—

Uterine Fibrosis (Metritis Fibrotica).

Pathology: Aetiology.—For this condition a definite aetiology seems lacking. Different causes are assigned by different authors; that on which one author lays stress the next man misses altogether and *vice versa*. No one author seems, however, to be able to prove that the cause assigned by him is the definite cause, although all give some proof of the particular theory they advance.

The main theories advanced are:—

(1) That it is a sequence of some failure of ovarian trophic influence, similar to that following the menopause. This view is advanced by Bandler, who gives instances of castration of animals, and in one case of a woman, which were followed by a uterine fibrosis and degeneration.

(2) That it is a change consequent upon arterio-sclerosis of uterine vessels (Caplin, *Pathology*, and Findley, *Diseases of Women*). However, if this view is tenable, it does not seem very certain, for in the uterus of all parous women these changes will be observed in the vessels, whether they be accompanied by an added fibrosis or not.

(3) That it is the result of a chronic infection which may follow the puerperium of an acute infection of uterus following operative interferences (Adams and McRae, *Pathology*). According to Herman, it is found sometimes in virgins, as a consequence of a long-standing leucorrhoea.

Morbid Anatomy: Macroscopic.—The uterus seems to vary in size. Cases with a typical history and microscopic picture are found with uteri that are smaller than usual, normal in size and somewhat increased in size. The uterine cavity in some cases is increased and in others part of the increase in thickness of walls takes place at the expense of the cavity. The walls are thickest in size, and usually show an increased density and firmness. The endometrium is usually not thickened.

Microscopic.—The main change is an increase both absolute and relative of the amount of fibrous tissue lying between the muscle bundles. This is not confined to between the bundles, but in places invades the bundle and lies between the individual cells of the bundle. This fibrous tissue has various directions, running both parallel to the bundles and at right angles to them. These areas are thickest in the neighbourhood of the vessels, and appear to be wrapped around them. In some sections the fibrous tissue appears to be arising from the adventitial coats of the vessels. Sometimes the coats of the vessels, and in areas where the fibrous deposit is fairly thick, areas of degeneration resembling hyaline degeneration, will be found. The vessels are usually thickened, showing either a thickening of the outer coats or of the intima, or of both; but, as has been said, these changes, in greater or less degree, can be found in the uterus of all parous women, and therefore have no special significance. According to Eden (*Gynaec-*

ology), in some cases a round-cell infiltration of the endometrium is found, and when this is present the case is usually described as one of chronic metritis.

References.

Adam and McRae—*Pathology*, p. 649.
Chayce—*Surgery*, Vol. II, p. 1016.
Eden—*Gynaecology*, p. 215.
Bandler—*Med. Gynaecology*, 598.
Findley—*Diseases of Women*.
Therman—*Diseases of Women*.
Caplin—*Pathology*, 978.

What are the allied causes of uterine haemorrhage? Is there such a thing as arterio-sclerosis of the uterus *per se*, apart from a general arterio-sclerosis. It is an extremely difficult thing to estimate. All pathologists will assert that the parous uterus will always show thickened blood-vessels, but it is impossible to detect the difference. I am now inclined to the belief that arterio-sclerosed vessels are always associated with a fibrosis of the uterus. I look upon the allied causes of uterine haemorrhage as being those that produce a bleeding without any obvious cause. There is present only the one symptom, haemorrhage—irregular, excessive, and unexpected. There are cases that only the curette will define the cause; namely, any and all kinds of endometritis, the cervical and intrauterine polyp, the intrauterine pedunculated or submucous fibroid, and most important of all the malignant body of the uterus. All these cases demand the earliest possible investigation, and let me at once state that pain as a symptom in diagnosis of malignancy of body or uterus is of no practical use. It only occurs late in the course of the disease, and is almost a positive indication that the malignancy has reached a stage of inoperability.

ON THE TRANSMISSION OF AUSTRALIAN DENGUE BY THE MOSQUITO STEGOMYIA FASCIATA.

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(Continued from page 184.)

Case VI.—B.B., set. 34, male, medical practitioner.

May 13, 1916.—This was the last time B.B. was in the dengue natural area. He was bitten by mixed Grafton mosquitoes.

May 14, 1916.—He was bitten by mixed Grafton mosquitoes, and arrived back in Sydney (mid-day).

May 23, 1916.—He was bitten with *Stegomyia fasciata* mosquitoes. Fifteen bites were counted. Time, early afternoon.

May 29, 1916.—He felt quite well on rising, but during the morning, while working, he had shooting pains in the head. In the middle of the day he had definite slight headache and slight "tired" feeling, and slight pains in the legs and arms. The temperature at 2 p.m. was 97.4°; at 4 p.m., 97.6°; and at 7 p.m., 97.4°. The symptoms were so slight that B.B. felt inclined to put them down to imagination, the wish to acquire dengue being father to the thought. He now regards these symptoms as prodromal, and think they might not have been noticed in a non-expectant individual.

May 30, 1916.—He was feeling "off colour," with occasional slight attacks of nausea, and had a tired sensation in the limbs and slight headache; he was worse towards evening, when he felt cold, shivery and tired, and went

¹ Since writing this paper I have read in a recent gynaecological journal that the fibrosed uterus will not bleed after the ovaries are removed, and the writer advocates destroying the ovarian function by prolonged and multiple applications of X-rays. But, as the treatment probably will persist for twelve months and terminate with a doubtful result, most surgeons would prefer something a little more tangible. I may state that, in future, I intend to shell out the cervix in doing sub-total hysterectomy much more effectively than I have done before, and shall always destroy the cervical mucous membrane by using the cautery.

to bed early. He passed a rather disturbed night. The temperature at 4 p.m. was 98.4°.

May 31, 1916.—On rising, he had malaise, headache, nausea, shivering, pains all over (arms, legs, across shoulders, neck, spine, knees, ankles), and general headache. This increased during the day. The eyes were not very bad, but he was conscious of them feeling abnormal. He had slight sore throat and post-nasopharyngeal irritation, but no coryza. He felt utterly weary, and could not concentrate his attention. The temperature at 11 a.m. was 99.3°; at 1 p.m. it was 100.3°, and the pulse-rate was 80; at 3.45 p.m. the temperature was 101.1°, and the pulse-rate 96. A prodromal rash was present. The incubation period was about 7½ days to the onset of fever.

Description of prodromal rash seen by Dr. Chapple: "A rash resembling subcuticular petechial areas, varying in size; it is most marked on the abdomen, but also present on the back. It is most prevalent in lumbar region posteriorly. The arms are not markedly affected. Each area shows no point of deepest intensity, and the edge is not sharply defined. The colour does not completely disappear on pressure. The colour might be described as a light raw ham colour, with a faint tinge of purple."

J.B.C.—Obscure mottling on the trunk; on the back the hair follicles prominent.

B.B. was seen by several medical men. All agree that a distinct rash was present.

Later in the afternoon he felt worse, but managed to work until 4.30, when he went home. He arrived home at 6 p.m. At 6.30 p.m. the temperature was 102.8°; at 8 p.m. it was 103.3°, and the pulse-rate was 116.

Note at 8 p.m. — The patient was sitting by a gas fire; he felt very hot, but not very ill. Body pains, while resting, were not troublesome. He was very nauseated after tea, of which he ate moderately.

After going to bed, at 9 p.m., he had slight vomiting and marked nausea, and was very restless in bed, the pains in the ankles being maddening. He could only rest by protruding his feet outside the clothes, and could not bear the weight of the clothes. Once he got to sleep he slept well.

June 1, 1916.—The patient lay in bed all day. The headache was bad, and was accompanied by photophobia and eye pain. Shivering occurred at times, and giddiness on

standing. He sweated twice profusely late in the day. There was slight mental wandering at night, but he slept fairly well.

June 2, 1916.—He woke up with headache and eye pains still present, but feeling better, and went into town, though feeling rather shaky, very tired and depressed, nauseated and headachy. The temperature in the morning was 99.0°. Leucocytes, 5,200. Blood drawn for injection experiments. He went to bed at 7.30 p.m.

June 3, 1916. — He did nothing all day. Headache was present, and his eyes were tender. He felt very depressed.

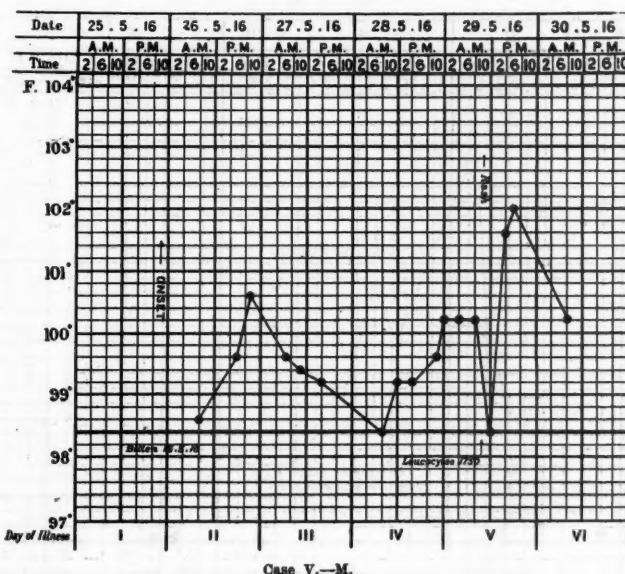
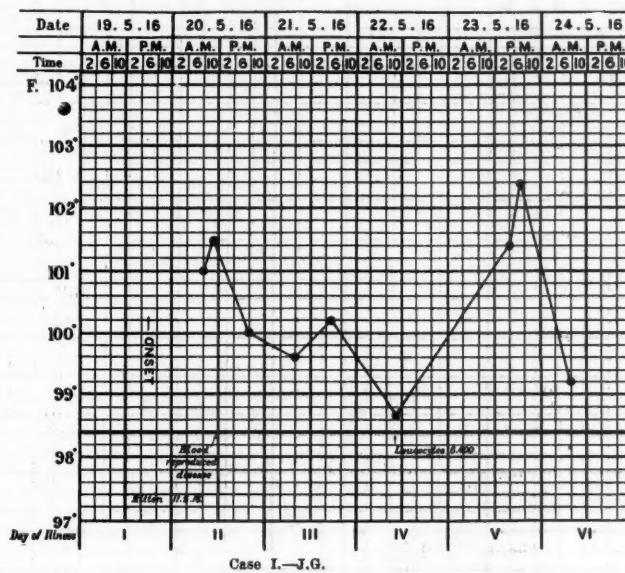
June 4, 1916. — The patient felt much the same as on the previous day. The nausea was marked, especially after food. There was a well-marked rash all over the trunk. This rash was distinctly different in colour from the prodromal rash. The lesion might be described as an irregular, fairly bright mottling of the skin; irregular dark areas and irregular pale areas alternated. On the

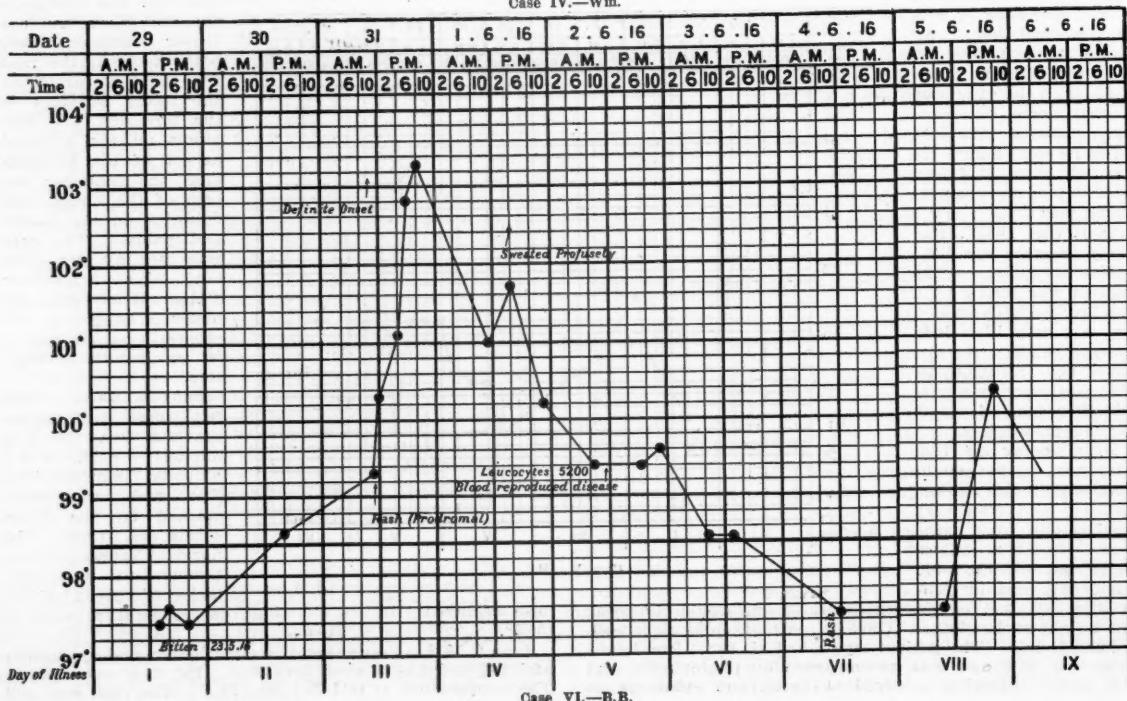
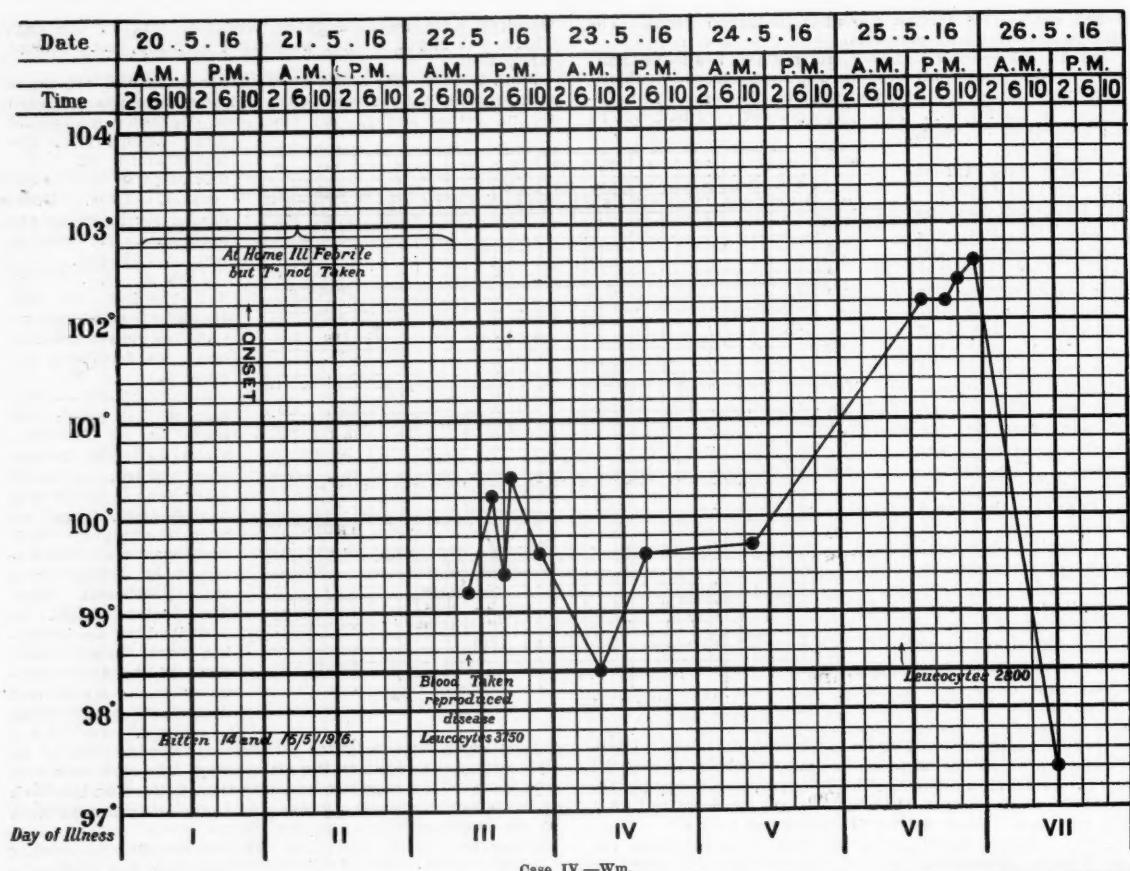
darker areas were brighter punctiform lesions. One of us (B.B.) likens the rash to the strawberry. The rash was best seen early in the morning, and was then noticed on the back of the wrists and on the flanks and back, being less marked on the abdomen. Later in the course of the illness it was well-marked on the forearms. The elbows were somewhat red, but not distinctly so; the flexor and extensor surfaces were both involved; the rash was most apparent on the flexor surfaces of the forearms, and was slight on the external aspect of the buttocks and the anterior aspect of the knees, and doubtful on the ankles and palms. The rash was seen by Drs. Cleland, W. G. Armstrong, Paton, Woolnough, Isbister, Chapple and others, who all concur in its definite characters.

June 5, 1916. — He felt worse than on the previous day. He was intensely cold, and shivered immoderately. The rash was well-marked on the arms, wrists and trunk. The normal. Nausea and attempature was sub-tacks of great giddi-

ness occurred. In the evening the temperature rose to 100.3°.

June 6, 1916.—He awakened feeling better, and apparently afebrile, and had a good breakfast. He then began work. The temperature at mid-day was 98.1°. The rash was still





well-marked; it was seen by Drs. Cleland, Paton and Armstrong.

June 7, 1916.—He still had headache and slight tenderness on moving his eyes. There was still some nausea and tiredness. The temperature at 11 a.m. was 97.6°.

For the rest of the week he was not feeling "himself," although afebrile. There was a tendency to have headache during part of the day, and pain on moving the eyes and stiffness in the joints, back, etc. A bad taste in the mouth was noted, and inability to enjoy smoking. There was also noted some itchiness of the skin and palms of the hands.

June 13, 1916.—Blood was drawn for injection experiments.

A person inoculated with blood taken on June 2, 1916, developed typical mild dengue. Another person, subject of a previous experimental attack, remained well (see injection results).

June 27, 1916.—The skin was peeling on the legs and hands. The patient had symmetrical, bright-coloured patches of rash on the hips and across the back, which were first noticed about a week before. There were irregular bright red areas alternating with pale skin. The skin was very irritable all over. He still had a stiff, painful feeling on rising in the morning. Otherwise he felt quite well.

The patches of rash on the hips gradually faded, leaving some staining.

Injection Experiments.—G.D. swallowed blood from a previous (blood inoculation) case on May 24, 1916, and complained of pains in the head and dizziness from May 28, 1916 (four days later) to May 31, 1916, but had no rise of temperature, the temperature being taken once daily. On June 2, 1916, he was given 1 c.c.m. of blood from B.B. subcutaneously. He became ill on June 11, 1916 (nine days later), and his temperature rose on June 12, 1916, in the evening. He had a definite attack of dengue, with a single temperature curve.

Another experiment was made with the same specimen of blood; 1 c.c.m. was injected into volunteer H., who had passed through a typical attack of experimental dengue, commencing on May 25, 1916, and terminating on May 30, 1916. No symptoms followed this second injection within a period of fourteen days.

With the specimen of blood taken on June 13, 1916 (14 days from the onset of B.B.'s illness), a volunteer was injected with 8 minimis. No symptoms or signs of dengue followed during the subsequent nine days.

Discussion of Results.

In discussing the above results, it is important for the reader to bear in mind that our main object was to determine whether either or both of the mosquitoes experimented with were capable of transmitting infection. We were quite in the dark, even if one or both types of mosquito were a transmitter of the disease, of a number of other important circumstances connected with such a possible means of transmission. The mosquito, if it carried infection at all, might or might not need a period to elapse after biting a patient before it became able to infect another person, and might remain infective for a period quite undetermined by us. Hence mosquitoes collected might not prove successful transmitters, not because they could not carry infection, but because they were not for one reason or another "ripe." Therefore, although our mosquitoes were collected in a district where dengue was prevalent, some from houses where patients were actually ill, and many from houses where patients had recently been ill, we felt it advisable to increase the

chance of getting results by letting them bite patient X., who had acquired the disease in the usual manner, on the dates mentioned. We were not in a position, and did not try, to solve the question of the "ripening" period, if any, nor of the period during which the mosquitoes remained infective.

Again, we deemed it advisable to have our first volunteers bitten more than once, and that because of the uncertainty as to whether the mosquitoes had ripened, especially if infected from the known bitten patient, and because of the unknown time which the mosquitoes might remain infective. We foresaw that, to a certain extent, these multiple bitings might complicate our results and prevent us from obtaining the exact incubation period, but we attempted to arrange the experiments in such a way that we might hope to elucidate this point. As it turned out, the double biting has actually only interfered with the understanding of the incubation period in one case (Wm.), and the later volunteers, being only bitten once, tend to confirm, in this case, the longer incubation period rather than the 5 days 5 hours period which may have been the incubation period for Wm.

That we have succeeded in proving the principal hypothesis, the possibility of transmission by mosquitoes, depends mainly on the satisfactory nature of the evidence that our apparently successful cases were really instances of dengue fever. If we are successful in this there seems no escape from the conclusion that transmission had occurred through the agency of the *Stegomyia fasciata* used by us.

We have not, in our opinion, shown conclusively that *Culex fatigans* may not also spread the disease, though we think this unlikely.

That the disease which followed the biting of our volunteers by *Stegomyia* mosquitoes was dengue there can be no reasonable doubt when the following circumstances are considered: In the four successful cases the illness began at a period of from six (possibly five) to nine days after being bitten, an incubation period whose limits were the same as those of cases of dengue fever conveyed by blood inoculation from previous cases. The symptoms, signs and clinical characteristics of the disease in the four successful mosquito cases were indistinguishable from those in attacks of dengue naturally contracted. Marked rashes in two of the cases were typical of those seen in certain dengue cases, and could not be confounded with those of measles or scarlet fever, the other febrile complaints with which a marked rash is usually associated. After the rashes disappeared, these two patients suffered from intense itching of the parts affected by the rash, in one case to such an extent as to be almost unbearable. Such intense pruritus, rendering life temporarily a burden, has occurred in some instances in the North Coast district of this State following the disappearance of the rash of dengue. This itching, following a febrile complaint accompanied by a rash, we consider to be almost pathognomonic, when it occurs, of dengue.

Of other noteworthy features characteristic in general of attacks of dengue fever, the following may be noted: All the four patients showed a swol-

len, hot-looking condition of the face, with a flushed, red suffusion, resembling somewhat that seen in the incipient stages of measles, or after an alcoholic bout. They all had, in fact, what may be called the "dengue face." All the cases showed a sudden onset, more or less characteristic of dengue, and not so common in other febriculae. In all there was a marked tendency to a double rise of temperature, the early rise being followed by a fall for a few days and then by a final rise. The blood examinations made during the course of the disease showed a definite leucopenia, a characteristic feature of dengue.

In the three cases in which blood was taken during the height of the disease and injected into volunteers who had never been in contact with the patients, the disease was in this way successfully transmitted after the usual incubation period.

From the above résumé it is clear that the disease in the four volunteers was not measles, German measles, or scarlet fever, or any of the other acute infectious fevers accompanied occasionally by similar rashes, such as the early stage of small-pox.

In all large communities, there are continually present febrile complaints not accompanied by definite rashes, which are loosely styled "influenza." These vary much from time to time, and probably represent a number of distinct entities, with features so little characteristic, and symptoms so mild and evanescent, that it has not been possible as yet to differentiate one from another. Many of these are accompanied by a definite coryza, which was absent in our experimental cases. During the course of our experiments, such complaints were not absent from Sydney, and though in specific instances individual cases might resemble aberrant cases of natural dengue, none could be considered as typical cases, such as were our volunteers, and rashes did not develop.

Having established that the disease occurring in our four volunteers was dengue fever, it is necessary to show beyond reasonable doubt that the disease developed as a result of the bites of certain infected mosquitoes, *Stegomyia fasciata*. As two of the four individuals had never been in a dengue area, while a third had been away from such an area for eight years, and as the experimental bitings took place in a district in which dengue is unknown, except as imported cases, and as we know of no other means by which they could have become infected, no other conclusion is left save that the *Stegomyia* mosquitoes transmitted the disease. It is true that one of us, who contracted the disease naturally, had been in more or less daily association with two of these three volunteers, and had seen the third for a few minutes, but it is hardly reasonable to suppose that he should have carried infection to these three persons and to these three only, and yet have failed to convey infection to other members of the staff and to his own household. The fourth volunteer, one of us (B.B.), had returned recently from a dengue area. It might, therefore, be suggested that the disease from which he suffered was naturally contracted there. It will be noted, however, that he had been away from the dengue area for a period of time far exceeding the established limits of the incubation period, so

that, were his case one of natural infection, then the incubation period, in his case, of a typical attack must be considered to be twice as long as our results in other cases would indicate.

As further showing that the disease developed by the four volunteers is to be attributed to the bitings of the mosquitoes, is the fact that, though each volunteer was bitten on different days and with varying intervals between them, the incubation periods of their complaints fell within the time found to be the incubation period in our blood inoculation experiments. Such results in four instances must be considered more than mere coincidences.

That we were not successful in conveying the disease to all the volunteers is not to be wondered at. These other persons were certainly not so extensively bitten as were the successful cases. As perhaps only a certain number of mosquitoes were infective, and as mosquitoes engorged with blood one day, whether infective or not, may not feed again perhaps for several days, it can be understood how such failures can occur, whilst the opinion that there may be a possible minimum amount of infective material necessary to ensure successful inoculation by bites of the mosquitoes is another hypothetical explanation.

Apart from this, the positive results obtained in the four successful cases overshadow entirely the three negative results, which need only be considered from the theoretical point of view as to why the patients did not develop the disease, and not from the practical point of view, as to whether or not *Stegomyia* is the vector.

Incubation Period.—We are able, fortunately, to draw reasonably accurate conclusions, even from the first doubly bitten cases, as to the incubation period.

Case I.—J.G. became ill while actually being bitten for the second time. His is obviously an eight days' incubation period. Case IV.—Wm., the second successful case, was bitten on two successive days, and his incubation period would be six days and nine hours, or five days five hours, depending on whether we count from his first or second biting. In the case of Nurse M. the incubation period is definitely nine days ten hours, and in the case of B.B. about $7\frac{3}{4}$ days, if we count from the first rise of temperature, and about $5\frac{3}{4}$ days if we count from the first feeling of malaise.

This gives us for our mosquito cases an incubation period of approximately 6 to $9\frac{1}{2}$ days, possibly $5\frac{1}{4}$ to $9\frac{1}{2}$ days.

General Conclusions from Series II.

(1) *Stegomyia fasciata* mosquitoes caught in a dengue infected district in the surroundings of cases of the disease, and some of them known to have fed on a dengue patient on the first and second day of his illness, transported to a non-dengue district, reproduced the disease in four out of seven persons on whom biting experiments were conducted.

(2) Blood taken from three of these four cases reproduced the disease when injected into further persons. The blood of one case was not tested.

(3) The incubation period of the four cases was found to be possibly between 5 and $9\frac{1}{2}$ days, prob-

ably between 6½ and 9½ days, counting from the biting to the definite onset.

(4) No known case of contagion occurred from any of the above four cases.

(5) No evidence was obtained from two cases, one of which was heavily and repeatedly bitten with *Culex fatigans*, that *Culex fatigans* is capable of acting as a transmitter of dengue fever.

It is necessary to state here that the investigations made by us in connexion with dengue fever had to be carried on coincidentally with the ordinary laboratory work required by the Department. The stress of war conditions rendered such ordinary work exceptionally heavy, and it was therefore realized that only the most salient points to determine in connexion with the aetiology of dengue fever could be successfully attempted. Had our whole time been available for detailed investigations into the many aspects of dengue requiring elucidation, we would have liked to have gone fully into such interesting points as the changes in the blood cells occurring in the disease, and other haematological and clinical questions. Instead, we had to content ourselves with doing all that could be compassed in the time and with the material available to us.

References.

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Reports of Cases.

NOTES ON A CASE OF CARCINOMA OF THE MALE BREAST.

By Harold Rischbieth, M.D., F.R.C.S.,
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Mammary carcinoma in the male is a rare condition. Bland-Sutton¹ states that carcinoma of the breast is 100 times more frequent in the female than the male. Marmaduke Sheild² gives similar figures—9 male cases in a series of 628 of carcinoma mammae.

For this reason the case to be described may be of interest. Further, the age incidence, 33 years, was rather young. Important questions as to the extent of operative procedure in such cases arise from it.

Case History.—M.M., aet. 35 years, a storeman, was born in this State. He has never been abroad. He was admitted to the Adelaide Hospital on February 3, 1916, complaining of a growth in the left breast, which he had first noticed two years before. One year before my operation a growth had been removed from the left breast. Two months before my operation another growth had been noticed there. Neither tumour had ever caused pain, nor had there been any discharge from the nipple.

Previous Illnesses.—Pneumonia 20 years ago. No other illnesses.

Family History.—Good on both sides.

Physical Examination.—The patient was a muscular, active man, in perfect health, neither obese nor emaciated. Every organ was normal, with the above exception. The left breast showed a scar one inch long over the nipple. Beneath this was a small hard mass about the size of an

almond kernel. There were two other small indurated tumours in the breast, one about one-third of an inch above and the other about the same distance above and external to the nipple. The skin was not attached to either of the latter. All three moved together freely over the deeper tissues. There was no bloody discharge from nipple. Some half-dozen enlarged glands of stony hardness, varying up to the size of almond kernels, were felt in the left axilla along the margin of the *pectoralis major*. All belonged to the anterior set. No other glands were felt.

Operation.—February 5th. An elliptical incision was made one inch and a half wide of the tumour, down to the pectoral fascia. The incision was prolonged upwards along the anterior axillary fold to the apex of the axilla. The skin and superficial fascia of the left side of the thorax other than that enclosed by the incision were reflected, exposing the pectoral fascia. The pectoral fascia and a layer of the superficial fibres of the *pectoralis major* were dissected up over an area bounded by the clavicle, the left sternal border and the seventh costal margin. The fascia and similar muscle fibre layer of the *seratus magnus* continuous with this were also dissected up as far as the mid axillary line. The whole of this, together with the growth, the axillary fat and a layer of *pectoralis major* was dissected upwards and outwards as far as the axillary vein. This was then cleared by dissection, and the whole mass removed in one piece, which also extended far in beneath the *subscapularis* muscle. There was no removal of the fascia or glands on the deep surface of the *pectoralis major*, nor of the great bulk of that muscle itself, nor of the fascia of *rectus abdominis*.

Pathological Report from the Adelaide Hospital Laboratory.—"Microscopic sections of the growth show adenocarcinoma, with metastatic deposits in the axillary glands."

Comments.—This is the operation advocated by Marmaduke Sheild³ for cases of carcinoma of the male breast, such as this, in which the growth was not fixed and in which the lymphatic glandular involvement was not extreme. But it seems very much open to question whether it is sufficiently radical; whether it would not have been safer to remove the sternal portion of the *pectoralis major* and the tissues beneath and the fascia of the *rectus abdominis* as well. It is a principle that carcinoma of the breast in the male must be treated just as in the female.⁴ Sheild³ states: "Cancers of the male breast are often small and insignificant. This is no reason for timid or limited removal." No surgeon would perform limited removal operations for carcinoma of the female breast. Yet, in this case, and in another of 19 months' duration, published by Dr. J. C. Verco,⁵ such operations had been performed. There resulted early recurrence and lymphatic glandular involvement, with, in the latter case, metastatic deposits in the cervical spinal column three weeks after the operation.

One would wish to emphasize the point, for cancer of the male breast appears to be regarded by some surgeons as of comparatively low malignancy, analogous to epithelioma of the lip. This, if so, seems to be a dangerous belief, leading to inefficient operations. For everything about this case, at any rate, points to a rather high grade of malignancy, early age incidence and local recurrence, and a glandular involvement in ten months. And in Dr. Verco's case there was evidence of metastatic growth in the spinal column one year and seven months after the appearance of the primary growth in the breast, which does not indicate a degree of malignancy below the average for the female.

Even in the case of epithelioma of the lip, results show that operations in which very extensive glandular removal is not performed are frequently unsuccessful; the tendency is more and more to radical operations. In the case of carcinoma of the breast in the female, improvement in results has been partly due to earlier operations, but more than this to more radical operations, planned in accordance with anatomical and pathological knowledge. There seems to be no reason to regard the malignancy of cancer of the male breast as in any way different from that of the female. Therefore, the operative procedure should be the same.

In spite of the natural desire to avoid impairment of the use of the arm in manual workers, such as this

¹ Bland-Sutton—"Tumours, Innocent and Malignant," 1893, p. 225.

² Marmaduke Sheild—"Diseases of the Breast," 1898, p. 497-8.

³ Marmaduke Sheild—"Diseases of the Breast," 1898, pp. 497-8.

⁴ Senn—"Pathology and Treatment of Tumours," 1900, p. 315.

⁵ J. C. Verco—"Mammary Cancer in a Man, with Spinal Symptoms from Metastasis," *Adelaide Medical Students' Society Review*, June, 1916, p. 63.

man (figures show that the condition does not by any means always occur in men beyond the prime of life), the proper course appears to be, in a case of this degree of malignancy, to perform the complete operation, just as in the female. That is, to go further than is advocated by Sheild for such a case, and to remove the sternal portion of the *pectoralis major* and the structures beneath it, etc. Palliative operations can be but rarely called for here. And anything less than this seems, as in the female, to be fraught with danger of metastasis.

Subsequent History.—The accuracy of these deductions can be tested. On July 25 the patient returned for examination, that is, $5\frac{1}{2}$ months after operation. His condition was as follows: The cicatrix of the last operation, extending from the seventh left costo-chondral junction to about the lower border of the insertion of *pectoralis major* in the arm, showed no trace of recurrence. In the skin between this cicatrix and the anterior axillary fold, over the fourth and fifth intercostal spaces and the fifth rib, there were four small pale pink, hard nodules, about the size of millet seed. They were about one inch from one another and about $1\frac{1}{2}$ inches from the cicatrix, arranged somewhat in the form of a crescent. They appeared to be recurrences. About half-an-inch internal to the mid-point of this crescent there was a wooden-hard nodule of about the dimensions of a haricot bean. The skin moved freely over it, without puckering. The nodule moved with deeper structures, *pectoralis major*, to which it seemed to be firmly adherent. It was painless, and not tender. There was another nodule, showing the same features, about the size of a grain of wheat, at the level of the fourth rib, a little anterior to the mid-axillary line. These two nodules were certainly recurrences. The inefficiency of the last operation is thus shown. On July 28 the complete operation, as for the female, was therefore performed. The ellipse of skin was made about two inches wide of the nodules in the skin. The whole of the sternal portion of *pectoralis major* was removed with this in one mass. All the fascia and fat beneath this muscle was dissected off the thoracic wall, continuous with the mass, as high as the clavicle, the *pectoralis minor* being detached. The axillary vein was cleared by dissection. The fibrotic contents of the axilla, resulting from the last operation, was then dissected, continuous with the mass, downwards and backwards, together with a layer of muscle fibres of *serratus magnus*. *Subscapularis* and *latissimus dorsi* were laid bare in clearing the mass. The *pectoralis minor* was then sutured back in position.

Pathological Report by Mr. L. B. Bull, of the Adelaide Hospital Laboratory.—“There is a growth of malignant tumour cells in the *cutis vera*, a larger growth in the subcutaneous tissue, and a smaller mass in one of the lymphatic vessels. Type of tumour, adeno-carcinoma.”

There were no pectoral fascia, axillary glands or fat; these had been removed at the first operation. On macroscopic examination of the specimen, hardened in formalin, the nodules in the skin and the two larger tumours gave, on section, the hard white appearance suggestive of carcinoma. The two latter were growing out from a plexus of lymphatic vessels in the superficial fibres of the *pectoralis major*, which the formalin had made to stand out clearly. Neither of the deep nodules represented glandular metastases, but rather a new cancerous growth.

Bearing in mind that, after extensive operative interference, the normal relations of structures must be much disturbed, there seem to be three possible explanations of these conditions:

(1) The skin nodules represent the growth of cancer cells which had spread along cutaneous lymphatics, beyond the radius of the skin incision before the former operation (that is, more than $1\frac{1}{2}$ inches away from the primary growth); the deep nodules are secondary to these.

(2) The skin nodules are secondary to the deeper tumours, which represent the growth of cancer cells present in the lymphatic vessels at the time of the former operation. These, if this be true, must have lain in the muscle fibres of *pectoralis major* deeper than the superficial, for the latter were removed with the pectoral fascia or in subcutaneous tissue.

(3) The two sets of nodules have formed independently of one another. It is of no practical importance which is true. But the specimen shows that either the area of skin

removed, 3 inches \times 6 inches, was insufficient, or that the removal of deeper tissues was not complete enough, that nothing less than the complete operation, with the removal of the widest possible area of skin, offers any reasonable prospect of success in such a case as this.

Further Comments.—Since this operation was performed, Dr. Charles Todd has kindly called my attention to an article in “The Clinics of John B. Murphy,” Vol. III, No. 3; June, 1914, entitled “Carcinoma of the Male Breast.” Dr. Murphy states (p. 569) “Carcinoma of the male breast is a much more serious proposition than carcinoma of the female breast, because there is not the relatively clean-cut encapsulation in the former, which you see so commonly in the latter.” Again, on p. 570, “The percentage mortality is much greater in carcinoma of the male breast than it is in carcinoma of the female breast.” On page 572, “If the tumour in this case to-day proves to be a carcinoma, we shall perform the radical operation, removing the entire breast and cleaning out the axilla. If it proves not to be a carcinoma microscopically, then we shall put a large black interrogation point after it, because we have learned that the clinical course of the disease, plus the gross pathological findings in many of the cases is just as valuable in differentiating between malignancy and benignancy as are the microscopic findings.” This teaching upon the subject of the extent of operative procedure by an authority thus indicates that the conclusions arrived at by deduction from this case are correct.

I have since been enabled, through the courtesy of Professor Watson, of the University of Adelaide, to read the thesis of Professor Paul Poirier, of the University of Paris, upon the subject of tumours of the male breast.*

He states: “All the malignant tumours have been observed in the mammary gland of the male, in forms the more rapid and forms the more slow: but in most cases they manifest themselves in the less severe forms” (“formes les moins mauvaises”). The opinion of Velpeau is quoted: “Removal offers a somewhat better chance in the male than in the female”; that of Birkett, “It is not a form as active in the man as in the woman”; that of Harteloup, “Less grave than in the female; the less grave forms are the more frequent”; and he concludes, “We think, with Velpeau, that it is a little less grave in the sense that it manifests itself usually in the less severe forms, evolves more slowly, occupying more time for this, and affords better chances of successful surgical intervention.”

His final conclusions with regard to carcinoma of the male breast are:—

“The breast in the male, as in the female, is the site of various kinds of cancers. The most common is scirrhus carcinoma, usually of a comparatively inactive type. Such tumours show the same features in the male as in the female, with the difference that, on the whole, these are all less marked. The chances of radical cure, variable according to the anatomical features of the tumour, appear to be greater in the male than in the female. The only treatment is excision, as extensive and as complete as possible.”

It is therefore obvious that it is necessary to view cases in perspective. The study by Dr. Poirier of a large number of cases (58) has shown that such tumours vary in malignancy in the male as in the female. Since, however, there is no known way of distinguishing the one from the other at the stage at which alone in the most cases operation affords reasonable prospects of radical cure, the teaching of Dr. Murphy as to operative procedure is the only one to follow.

Appendix.—Dr. Poirier’s paper is rather inaccessible in Australia; and it appears to have been little studied outside his own country. It may therefore be worth while to give a short abstract upon those particular points that appear to be the most important. For, although this paper was published as long ago as 1883, it may be suspected that it is still about the best treatise upon the subject in existence.

(1) **Types.**—Typical scirrhus. (This is much the commonest.) Scirrhus, pustular and disseminated; *cancer-en-cuirasse*—without ulceration; epithelial carcinoma, with generalization in neighbouring lymphatic vessels; encephaloid or medullary carcinoma; melanotic carcinoma; cystic carcinoma; carcinoma with rarefaction of bone; with metastasis in bone.

* “Contribution à l’étude des tumeurs du sein chez l’homme. Étude clinique du Cancer.” *Progrès Médical*, Paris, 1883.

"The ordinary form of tumour is atrophic scirrhus; of slow evolution."

(2) Age Incidence.—"The common age period of cancer of the breast in the male is from 40 to 70 years." In 58 cases there were: Between 20 and 30 years, 1 case; between 30 and 40 years, 7 cases; between 40 and 50 years, 15 cases; between 50 and 60 years, 16 cases; between 60 and 70 years, 15 cases; between 70 and 80 years, 3 cases; between 80 and 90 years, 1 case.

(3) Breast Affected.—In 37 cases there were 23 left, 13 right, 1 both breasts.

(4) Size of Tumour.—"It is important to state that, in most cases, the size of the tumour after having remained insignificant for a more or less lengthy period, rapidly underwent considerable augmentation."

(5) Mode of Onset.—Usually insidious; the tumour remains small, and is not noticed for a long time; it is discovered accidentally. In other instances pain calls attention to it. In others, fairly numerous, it is a discharge of blood or sero-purulent fluid that leads to the discovery. In one case a small ulceration was the first thing observed.

(6) Course.—"It is usually only after a considerable time that the tumour gains a size sufficient to arouse the misgivings of the patient, and leads him to seek advice." In 26 cases this period was from one to fifteen years.

(7) Duration.—This probably averages, when such factors as difficulty arising from the insidiousness of onset are considered, about 3½ years.

(8) Ulceration occurs in most cases. This is true of scirrhus carcinoma as well as of epithelioma.

(9) Recurrences.—These are fairly common. In most they occur *in situ*, in the cicatrix, rarely in the lymphatic glands. In two cases in which the primary growth was of scirrhus type, the recurrence was encephaloid.

Reviews.

SCHOOL HYGIENE.

The School Medical Branch of the Department of Education of New South Wales is responsible for the publication of a book and a pamphlet. The book is entitled "School Hygiene"; according to the preface of the author, who is the Principal Medical Officer of the Department, it has been compiled for the assistance of students in the Teachers' Training College connected with the Department. We agree with the author that a book containing information on school hygiene in a condensed form is needed, and we also agree, to some extent at least, that the subject of school hygiene in a State such as New South Wales differs in certain respects with the same subject as applied to other countries. We would, however, point out that the desire to condense information and to adapt a subject to local conditions necessitates extreme caution to avoid the introduction of unwarranted dogma.

The scheme of the book is not novel. The author has interspersed anatomy and physiology throughout the volume, and has reserved chapters or parts of chapters for subjects connected with school hygiene, public health and first-aid. There is a want of order which detracts from the value of the book. In regard to the physiology, the desire to have something definite to teach has led the author to make statements which are wholly new to us, and with which physiologists do not agree. For example, we read that "the pulse felt in the arteries is brought about by the blood being forced into the arteries at each contraction of the heart." There is scarcely a page in that part of the book in which the physiology of the body is dealt with that does not contain some misleading statement. This is particularly deplorable in view of the fact that the book is intended as a source of information for teachers, and consequently as a basis for physiological instruction of school children. In the chapter on infectious and contagious diseases, we learn with surprise that "it is definitely

known that carriers are largely responsible for the spread of such diseases as diphtheria, typhoid fever and infantile paralysis." Dr. Willis defines carriers "as persons who, although apparently healthy themselves, yet harbour the germs of disease in some part of their body, and are thus capable of communicating the disease to other persons." Perhaps Dr. Willis will inform us what the nature of the casual organism of the last-named disease is. The danger of the domestic fly is very real; but there is no justification for a statement such as the following: "One fly can carry 100,000 disease germs in its inside, and can carry these disease germs for long distances. In addition, flies carry thousands of germs on their legs and external surface of their body." The author states that the immediate and actual cause of consumption is the admission, by way of the lungs, through being inhaled, of tubercle bacilli, or by way of the digestive tract, through being consumed with the food and drink. Volumes have been written, years of patient research have been spent and a vast amount of ingenuity has been evolved for the purpose of arriving at the solution of the problem of the immediate and actual cause of pulmonary tuberculosis. In spite of this, much difference of opinion still reigns; but one thing is quite certain, namely, that the inhalation of tubercle bacilli into the depth of the lung does not give rise to this dread disease.

In the chapter dealing with first-aid, among other strange advice we find directions for dealing with snake and spider bites. A diagram is introduced for the purpose of showing the lay person how to cut out the bitten part with a pocket-knife. Comment is unnecessary.

Under the heading medical inspection of school children in New South Wales the author records the methods adopted in his Department. It appears that cards are sent to the parents, asking for information. These cards are sent out before the examination takes place, and the replies are transcribed by the teacher on to a second card, and certain information obtained by the teacher is also entered. This information has reference to measurements, mental capacity and the like. It is not an easy matter to make accurate measurements of height and chest circumference, unless the individual carrying this out has been specially trained. We have heard of instances in which a teacher has recorded the maximum chest measurement by placing the tape obliquely from the spines of the scapulae to the xiphoid cartilage. The Medical Officer is supplied with both cards and makes a "fairly thorough examination of the child, paying special attention to the condition of the teeth, nose, ears, eyes, hair, speech, mental condition, etc." The result of his examination is entered on the back of the second card. It is probable that time is saved by the information collected by the parent and teacher being available before the examination is carried out. If this information is unreliable, the effect will be worse than if it were available after the physical examination had been carried out. A perusal of the annual reports of the Department reveals that the school medical inspectors are required to carry out so many examinations in the course of a year that they have not sufficient time at their disposal for the thorough examination of any one child. The intelligent teacher who reads the description given by Dr. Willis in his book will probably have a rude awakening when he or she experiences the real thing.

In the last place, the splitting of infinitives and other defects in grammar strike the reader all the more because the book is issued from the Department of Education, with the authority of the Minister.

The second publication, the pamphlet,² has a high-sounding title, "Is It Well With the Child?" The introductory sentence is extremely eloquent: "This booklet is issued in order that parents may realize the health advantages they may now command for their children through the medical staff of the Education Department." Modesty is obviously not one of its virtues. In the pamphlet a description is given of the medical inspection staff, the metropolitan dental clinic, the travelling hospital, the six travelling dental clinics and the travelling ophthalmic clinic. We learn that, as soon as the services of a sufficient number of medical officers are available, it is proposed to establish four addi-

¹ School Hygiene, for the Use of Students in the Teachers' Training College, New South Wales, by C. Savill Willis, M.B., Ch.M., M.R.C.S., L.R.C.P., D.P.H., Principal Medical Officer, Department of Education, 1916. Sydney: W. A. Gullick, Government Printer: Demi Svo., Illustrated, pp. 180.

² Is It Well With the Child?: The Work of the School Medical Branch, Education Department, New South Wales; 1916. Sydney: W. A. Gullick, Government Printer; Published by Authority of the Minister of Education; Crown quarto., Illustrated, pp. 16.

tional travelling hospitals and a clinic in Sydney for medical and surgical treatment of school children. The staff includes 14 medical officers. We learn that in the year 1914 approximately 92,000 children were examined, although in his annual report the Principal Medical Officer gives the number as 94,198. The Travelling Hospital is stated to be the only one of its kind in the world. We trust that the public will not be influenced by its uniqueness, but will judge it by the results of its work. The staff consists of two medical officers, one of whom is stated to be specially qualified in ophthalmic work. The Travelling Ophthalmic Clinic is not described in detail, and neither in the pamphlet nor in the annual report for 1914 is the number of medical officers attached to it divulged. It would seem that the Travelling Hospital and Travelling Ophthalmic Clinic provide medical attendance as well as inspection for between four and five thousand children. If there is but one medical officer in the Travelling Ophthalmic Clinic, there would be 11 school medical officers to inspect over 88,000 children; that is, each medical officer would have the Herculean task of examining the eyes, ear, throats, noses, hair, teeth, mental condition, skin, limbs and back of 8,000 children each year. It would be a more honourable undertaking to the community if the examination of these 88,000 children were spread over six years, or if 66 medical officers were appointed to carry out this work. The work in the dental clinics receives a laudatory eulogy from the author of the pamphlet. We trust that it is deserved, for the dental care of children is extremely important.

The following paragraph deserves quotation:—

As the result of the unqualified success that has attended the School Hospital, it was intended at the beginning of 1916 to establish and equip four additional Travelling Hospitals. Owing to the difficulty in securing the necessary medical officers, largely as a result of the scarcity of doctors caused by the war, and partly owing to the action of the British Medical Association, this has not yet been found practicable. As soon as possible, however, the proposed extension of the scheme will be put into operation, and the Travelling Hospital, instead of being limited in its work, as at present, will operate all over the State.

It is also intended to establish a Metropolitan School General Clinic, to which parents may take or send their children for treatment of eye, ear, nose, skin, throat and general medical defects.

The second part of the pamphlet contains some astounding information. If the statements contained in the first part are as far removed from the truth as are some of those contained in the second part, means should be adopted to disillusion the public. In the second paragraph it is stated that "the minute germs of blood poisoning, consumption, pneumonia, diphtheria, etc., etc., lodge in a bad tooth." We venture to state that the person who composed this sentence has a lively imagination. The following sentence reads: "The germs there multiply by the thousand in a few hours, and then enter the body, and thus give rise to the corresponding disease."

It will certainly not be well with the child if it becomes necessary to make untrue statements in order to persuade the parents that the work of the Department is being carried out in a satisfactory manner.

Hospitals.

BRISBANE HOSPITAL.

The Annual Report of the Brisbane Hospital for the year 1915 contains various matters of general interest and a small amount of data of medical interest. The total number of patients treated within the wards was 6,065, which is a substantial increase on the number for 1914. The number of beds was increased in 1911 from 308 to 316. In 1889 it was 227, and in that year only 3,017 patients received treatment. The average number of patients in hospital works out at 294, which is a considerably larger number than that obtaining in previous years. The num-

ber of patients discharged either cured or relieved was 5,032; 310 patients were discharged unrelieved, and 403 died. The mortality is given as 7%. It is stated that the number of patients represents 3.8% of the total number of inhabitants of the metropolitan area.

The average cost per bed occupied was £88. In 1914 it was £89. The average cost has varied since 1900 from £66 to the present figure. The income of the hospital during the year amounted to £24,517. Of this sum, £2,678 was derived from annual subscriptions, £5,777 from patients' payments, £4,000 from the Base Hospital allowance and £9,296 from endowment. The balance brought forward from 1914 was £1,514. The balance at the end of the year was £1,006. Suitable reference is made to the death of the Rev. Joseph Augustine Canali, of Captain Joseph David Buchanan, of Lieutenant-Colonel Hubert Harris, of Sister Myrtle Wilson, of Sister Norma Mowbray and of Sister Agnes Corfield.

In addition to those who volunteered for active service in 1914, Dr. H. J. Stewart, Dr. John Hardy, Dr. Gallagher, Dr. Clowes, Dr. Sutton, Miss Wilson (Matron), Miss Rooke and Sister Dorothy Webb have left for the front. Dr. E. Sandford Jackson resumed his hospital work after returning from the front. The Committee congratulate him on his recovery from his serious illness.

Considerable difficulty was occasioned by the reduction of the resident medical staff from five members to one. This reduction was due directly and indirectly to the claims of the war. The Dean of the University of Sydney was applied to, and on October 4, 1915, six graduates were nominated to the staff. One failed to take up duty and one left after five weeks' service. Although matters were considerably improved, renewed difficulties have arisen since February of the current year, when two of the resident medical officers undertook military duties.

The changes affecting the honorary staff are as follows: Dr. Morgan, who had been undertaking temporary duty as a Visiting Surgeon, returned, after Dr. Jackson had resumed his practice, to his position as Senior Assistant Surgeon. Dr. Cyril Weedon was appointed to the position rendered vacant by the death of Dr. Buchanan. Dr. Eugene Hirschfeld resigned his position of Senior Visiting Physician. Drs. Douglas, Hemsley and Crow have filled the vacancy temporarily.

The remainder of the report is occupied with matters of subsidiary interest.

QUEEN'S MEMORIAL INFECTIOUS DISEASES HOSPITAL, FAIRFIELD, VICTORIA.

Dr. F. W. Scholes, Medical Superintendent of the Queen's Memorial Infectious Diseases Hospital, has issued his report on July 5, 1916, for the year ending June 30, 1916.

The number of patients admitted during the year was 3,063. These, together with the patients in the hospital on July 1, 1915, totalled 3,240. During the course of the year 140 died and 2,796 were discharged. Three hundred and four were still under treatment at the end of the year. The admissions numbered approximately 2,000 per annum in the years 1910 to 1914. In the year ending June 30, 1915, there was an increase to 2,100, and this number was exceeded by 957 in the year under review. The case mortality has undergone less variation. In 1910 it was 3.86, in 1912 it reached 5.26, and in 1915 and 1916 it was 4.89 and 4.57 respectively. Unfortunately, the Medical Superintendent does not give in the report before us the distribution of the various notifiable diseases under treatment. The relative frequency of these diseases may possibly be gleaned from the figures for the fortnight ending July 5, 1916. In this period there were 227 cases of diphtheria, 67 of scarlet fever, 3 of pertussis, and 2 of morbilli.

The Board of Management of the Hospital has made the necessary arrangements for the erection of a new administration block, for a new discharge block, for an extension to the kitchen, and for stores and dining-rooms block, as well as for a new Nurses' Home. This work was commenced on August 1, 1916. Plans and specifications of five wards have been completed and tenders for the work will be called in September. It is anticipated that the new buildings will be ready for occupation by April, 1917.

The Medical Journal of Australia.

SATURDAY, SEPTEMBER 9, 1916.

The Causes of Medical Unfitness.

Good soldiers will win the war for us. Bad ones will be a drag on their comrades. The supply of men necessary to maintain the full complement of our ranks, as the Prime Minister has announced, is estimated at approximately 32,500 for September, 16,500 for October, and so on. There can be no doubt as to whether this number of men will be supplied from the Commonwealth. The Imperial authorities have asked for them, and the country will see that means are adopted to ensure that they are forthcoming. Of that there is no reasonable doubt. The medical profession has an important duty to perform in this connexion. Under a voluntary system the strong, physically fit man is more likely to offer himself for service than those with disabilities. Under the compulsory system, existing defects may be magnified and imaginary or pretended ones feigned. The medical officers examining recruits will have to exercise much careful judgement, in order that the utility of the reinforcements is kept up to a high level. This duty should not be performed in a casual spirit or lightly. The medical officer may perhaps be tempted to consider the amount of work required of him and the rate of remuneration received for the work. His duty to his country impels him to throw his whole energies into the matter and to safeguard the efficiency of our army by exercising critical judgement, and by utilizing all the means at his disposal to separate the chaff from the corn, to eliminate the men who will be burdens from our forces, and to retain those who are physically and mentally fitted for the strain of warfare.

A guide to the examining medical officer of great value has been issued in the form of a report by Colonel H. C. Maudsley, Consulting Physician to the Australian Imperial Force. This report is dated May 29, 1916, but has apparently only just issued from the office of the Government Printer. A fore-

word by Surgeon-General Fetherston, Director-General of the Australian Army Medical Services, is published with the report. Out of the fullness of his knowledge and experience, Colonel Maudsley is able to give some excellent advice to those examining men on enlistment. He points out that youths not well developed, men of poor physique, who have followed sedentary occupations and middle-aged men with cardio-vascular changes or with chronic disease of the lungs and respiratory apparatus cannot be trained rapidly to carry a pack and march on the sands of the desert. He does not suggest that all these individuals should of necessity be rejected, but care should be exercised to select those who are trainable, albeit at a slower pace than the average healthy young man, and these individuals should be given the advantage of a special course to fit them for the field. He calls attention to the difficulty in recognizing epilepsy, asthma, neurasthenia and some functional diseases which, in his experience, render the subject unfit for military duty. In regard to neurasthenia, he distinguishes sharply between what he terms pseudo-neurasthenia and the true disease. The former is not a bar to useful service, but he expressed doubt whether any man who has suffered from the latter will ever be a useful soldier. He finds that mental deficiency, degeneracy, definite immaturity and deficient physique should stamp the individual as unfit from a military point of view. Persons who have suffered from gastric or duodenal ulcer, intestinal disturbances following abdominal operations, acute rheumatism and atrophic paralyses, convalescents from cerebro-spinal meningitis and men with fibrosis of the lungs and emphysema, chronic valvular disease of the heart, arterio-sclerosis and tuberculosis should not be enlisted. In connexion with heart disease, he finds that, in the past, recruits with physical signs indicative of valvular disease have been passed. The examining doctor should have no difficulty in recognizing these signs. There is one other point emerging from the report to which reference should be made. Colonel Maudsley discusses the histories given him by the men who were being sent back unfit for further duty. The examining medical officer will obtain histories from candidates for enlistment according to their desire to serve or otherwise. It is probable that

the opinion recorded by the Director-General in his preface is sound, namely, that much reliance should not be placed on the medical histories of these men. Nevertheless, a careful medical officer will find it advisable to make enquiries and to attempt to harmonize his objective findings with the statements of the men. A skilled observer can usually arrive at the truth if sufficient trouble is taken.

It is stated that a similar report from the surgical point of view will shortly be issued by the Department. Taken together with Colonel Maudsley's masterly record, the examining medical officer will be provided with a guide of immense value.

A RED HERRING.

The Minister of Education of New South Wales has done us the honour of replying in the daily press to our comments on his remarks anent the treatment of school children by departmental medical officers. The statement is again built up on fallacies. In the first place, Mr. Griffith quotes a sentence from our article and gratuitously inserts in parenthesis the words "medical inspection and treatment" to define what we regarded as "his wrong-headed scheme." It will be noted that he has deliberately attempted to mislead the public. The medical profession has always approved of the system of medical inspection of school children, and has always lent this system its support. This fact is clearly set out in our article.

Mr. Griffith proceeds to argue on statistics. We may accept his figures as representing the number of defects alleged to have been discovered in the school children examined by the officers of the Travelling Hospital and the Clinics as correct, although they are extraordinarily high. He states that 45,049 children were discovered in 1915 to have some remediable defect. This figure includes dental defects, which are in the hands of the dentists attached to the seven dental clinics. The medical officers have nothing to do with these cases. In 1914 94,198 school children were stated to have been examined, and defects were found in 57,283. This is equivalent to 60.8% of the total. On this basis it would appear that the number of children examined in 1915 by

the officers attached to the Travelling Hospital and the Clinics would be 74,094. There is one Travelling Hospital, with two medical officers attached, and seven Dental Clinics, with seven dentists and some assistant dentists. In the absence of definite information as to the number of medical officers attached to the Travelling Ophthalmic Clinics, we assume that there is one. Mr. Griffith states that 4,768 children were treated at the Dental Clinics. Since Mr. Griffith specifically points out that the 45,049 defects were discovered at the Travelling Hospital and clinics it is reasonable to assume that not less than 60,000 children were inspected by the three medical officers attached to these institutions. This means that each medical officer examined the eyes, ears, noses, throats, skin, backs, limbs and mental condition of more than 20,000 children in one year, in addition to treating 2,280 children found to be defective. It is scarcely necessary to point out that inspection conducted at this rate cannot be reliable, and that nothing could be more inimical to the well-being of the children than to carry out lightning treatment for conditions alleged to have been detected at the hurried inspection. The evidence of specialists at the great metropolitan hospitals proves that in many instances the conditions diagnosed by the harried medical inspectors did not exist. The school inspectors cannot be blamed for this state of affairs. It is the system of requiring men to do more than is humanly possible that is at fault. We therefore claim that the wrong-headed scheme of the Department is not in the best interests of the children.

In regard to the latter part of Mr. Griffith's statement, in which he attempts to show that the reason for the opposition of the New South Wales Branch of the British Medical Association to the application of treatment by departmental officers is that fees would thereby be lost to practitioners, we cannot do better than quote the resolutions passed at the Extraordinary Meeting of the Branch on February 4, 1916:—

- (1) That the Association is opposed to State interference with the recognized system of medical practice and treatment, as being against the best interests of the community.
- (2) That any appointments of medical officers, prejudicial to the recognized system, will be declared inimical to the interests of the profession.

(3) That the Association approves of the medical inspection, but not treatment, of school children by Government Departmental Officers.

The Council of the Branch was instructed by the members to give publicity to these resolutions, and therefore had no reason to communicate directly with the Minister. Moreover, the Minister can scarcely expect a communication from men whom he has branded as butchers and rogues. The question of fees is of minor importance, and it is probable that if Mr. Griffith's scheme were put into effect it would bring more money into the doctors' pockets than the existing provisions for treatment.

MERCURIC CHLORIDE POISONING.

The proper understanding of the pharmacology and toxicology of the heavy metals presupposes an accurate estimation of the chemical changes induced within the body by the various agents. In actual medical practice the endeavour of the physician is to promote the elimination of the toxic agent and to apply remedies which may be expected to diminish or remove the symptoms characterising the poisoning. At times this symptomatic treatment may effect a masking of symptoms rather than their removal. Despite the frequency of accidental or suicidal poisoning by corrosive sublimate, the literature on this subject up to a few years ago failed to illuminate the essential chemical changes of the poisoning. The attention of practitioners should be directed to the metabolism under the influence of toxic substances, for no familiarity with the clinical signs of a condition will suffice to explain what is actually going on within the body, and what the practitioner has to do when confronted with an instance of the condition. Drs. D. Selater Lewis and T. M. Rivers have published an extremely interesting account of investigations on the metabolism in a case of bichloride of mercury poisoning.¹ Their chemical studies have led to the conclusion that prolonged and vigorous treatment should be continued as long as the patient is alive until complete recovery has rewarded the practitioner for his persistence. The authors have demonstrated that the total non-protein nitrogen in the blood is greatly increased during the period of definite symptoms, and that the same applies to the urea nitrogen. It appears from their observations and from those of other investigators that this accumulation of waste nitrogen is an important factor determining an early fatal issue. They therefore deduce that carbohydrates should be employed on account of their protein-sparing powers, in the endeavour to ward off the extreme degrees of this accumulation. Glucose may be given intravenously, when sugar cannot be retained in the stomach. The next observation of note is the lower concentration of chlorides in the plasma. The authors have endeavoured to find a plausible explanation for this fact. It must be re-

membered that the poisoning is frequently associated with an anuria of several days' duration, but that oedema is of rare occurrence. Ambard and Weill have shown that the urine contains practically no common salt if the concentration in the blood has sunk below a certain level. This level is known as the threshold of excretion. Normally the threshold of excretion lies somewhere around 562 mgrs. per 100 c.cm. of plasma. The authors have made a further striking observation which may help to illuminate the problems still requiring elucidation. After the anuria has passed off, notwithstanding considerable variations in the amounts of nitrogen and chloride in the urine, the specific gravity is markedly fixed. The disturbances in the renal organ are indicative of anatomical as well as of metabolic changes. The authors have relied greatly on the coefficient of urea excretion and the phthalein test to give reliable information regarding the renal function, but they call especial attention to the fixation of the specific gravity, which appears to characterize an extreme degree of disturbance. Experience has taught that the anatomical damage to the kidneys is usually repaired within three weeks, provided that rational treatment of the blood changes is instituted. The low value of the chlorides is not dependent on a real retention of chloride in the tissues, and therefore the exhibition of sodium chloride or of sodium bicarbonate is not contraindicated. On the other hand, it would seem that an alkaline treatment can be recommended, since the lowered tension of the alveolar carbon dioxide suggests the existence of an acidosis during the early stages of poisoning. We may therefore apply the knowledge gained in these chemical studies and in treating severe cases of mercuric chloride poisoning give glucose and alkalies, after the toxic salt has been removed from the gastro-intestinal canal.

THE TREATMENT OF RETURNED SOLDIERS.

The Council of the South Australian Branch of the British Medical Association have called the attention of members to the renewal of the arrangement with the military authority regarding the treatment of returned soldiers. The arrangement now entered into embraces treatment for a period of six months from the date of return. The rate of remuneration, which is to include the supply of medicine, is 25s. Soldiers obtaining treatment under this arrangement are required to procure and produce cards from the military authority. Medical practitioners should insist on the production of these cards, as the military authority will not be responsible for the payment for private attendance.

Since the last day of August, the 202nd, 203rd, 204th and 205th casualty lists have been issued. The number of officers and men reported sick in hospital is relatively small to the total number of casualties. The total number of names is 3,515, but it appears that some of the names occur in more than one list. Of this number, 5.5% are entered under the column sick. We regret to note that Captain H. F. H. Plant has been wounded. Among the progress reports is the name of Lieutenant-Colonel H. K. Bean, who is stated to have improved slightly.

¹ Johns Hopkins Hospital Bulletin, June, 1916.

Abstracts from Current Medical Literature.

OPHTHALMOLOGY.

(88) The Cause of Myopia.

Arthur Wood puts forward the suggestion that deficiency of the ciliary muscle is the cause of myopia, and that this deficiency is transmitted as an hereditary defect (*The Ophthalmoscope*, June, 1916). The ciliary muscle is comprised of outer longitudinal and inner circular fibres (Müller's muscle). In the emmetropic eye Müller's muscle constitutes about one-tenth of the ciliary muscle, in the hypermetropic eye one-third; while in the myopic eye it is deficient or entirely absent. The contraction of the longitudinal fibres pulls the choroid forward, which exerts a suctional force upon the fluids in the spaces of Fontana and promotes the flow from the anterior chamber into the supra-choroidal spaces. The contraction of the circular fibre draws the ciliary body inwards, widening the angle of the anterior chamber, opening up the alveoli in the pectinate ligament, and allowing more fluid to flow through. In the myope, in whom this bundle is deficient, this action is correspondingly diminished, and may be absent. There is no counteraction of the effect produced by the longitudinal fibres pulling the ciliary body forward and outward, thus lessening the angle of the anterior chamber. The action of the circular fibre is also that of a pump during the contraction and relaxation in accommodation. As in myopia accommodation is but little, if at all, employed, this pump action is wanting. There seems to be a general agreement among observers that the difference in structure is present at birth. The cause is due to hereditary transmission of the defect from the parent to the child. The author touches on the subject of increased tension in the myopic eye, encouraged by the large pupil of the myope, and the absence of accommodation, with its pumping action on the aqueous fluid. Other causes put forward for myopia, such as pressure of the extrinsic muscles, strain of convergence, stooping and spasm of accommodation should apply just as much to hypermetropic eyes. Other causative theories, as close work, town life, bad lighting, are not supported by statistics.

(89) Anilin Injuries of the Eye.

R. J. Curdy reports a further example of the serious injury to an eye from anilin pencils (*Archives of Ophthalmology*, May, 1916). His patient, a school teacher, while sharpening a copying pencil, got some anilin dust into the right eye. Four hours later the conjunctiva of the lower lid was deeply stained, also the bulbar conjunctiva, but to less extent. The colour disappeared in five days, but left the conjunctiva deeply congested and swollen. Two weeks later the lid conjunctiva was covered by a sloughing

membrane and an ulcer formed in the nasal half. It was not till eight weeks after the injury that the swelling subsided, leaving a symblepharon and ectropion of the nasal half of the lid. Dunn has already reported two cases which resulted in panophthalmitis. Snell reported a case in which the aqueous was stained with anilin and resembled a hyphaema. A similar staining occurred in Tyson's patient, but appeared more like a "pigmented hypopyon of a greenish-brown, metallic lustre." A staphyoma of the lower portion of the cornea developed. Cases reported by Haas, Kuwabara and Brown are also referred to. Vogt is of opinion that acid, neutral, or mordant colours produce little reaction, whereas the basic colours cause violent inflammation. One pencil examined proved to be rosanilin hexamethyl. As to treatment, 10% solution of tannic acid renders the anilin insoluble, and should be of use if it can be introduced early enough.

(90) Optic Neuritis After Influenza.

Knapp records the case of a woman of 32 who, two weeks after influenza, complained of defective vision (*Archives of Ophthalmology*, May, 1916). On examination, she was found to have optic neuritis, with small haemorrhages. There was a macular star in the right eye, and later on in the left eye also. Discharge from the posterior ethmoidal and sphenoidal sinuses was present. The ethmoidal sinuses were opened up without producing any effect upon the eye. Lumbar puncture showed a cell count of 21 lymphocytes, a positive globulin test, a negative Wassermann test, and sterile liquor. Influenza bacilli and pneumococci were found in the throat. A further lumbar puncture showed the cell count 14½, and the globulin test still positive. Three weeks later the result of the cell count was 1, and there was no globulin reaction. There was slow improvement, uninfluenced by treatment, and, after three months, the ophthalmoscopic changes disappeared, and the vision reached to $\frac{1}{20}$. Infection from the nose or cerebro-spinal fluid may be excluded; the optic neuritis was therefore caused by a haemogenous infection.

(91) Eye Affections Following Experimental Thyroidectomy.

In a previous paper, Walter Edmunds reported the occurrence of double cataract in a dog after excision of the thyroid and parathyroid (*The Ophthalmoscope*, June, 1916). Other eye conditions were found in sixteen experiments. In several cases keratitis was noted, often going on to ulceration and collapse of the eyeball. In some experiments the thyroid was removed on one side only, but the nerve supply to the other side was destroyed; in these cases there was a higher proportion of eye complications than occurred in double excision. Interference with the nerve supply to the thyroid has a most inimical influence upon the cornea. In Graves's disease there is excess of thyroid secretion, which acts

as a toxin, and in Sattler's opinion tends to produce corneal ulceration. Optic neuritis and optic atrophy have been recorded as rare complications. The author recommends partial excision of the goitre in suitable cases, and calcium in large quantities, best by giving a diet consisting solely, or nearly so, of milk. Fifteen grains of calcium lactate would correspond to $2\frac{1}{2}$ ounces of milk.

(92) Metastatic Ophthalmia.

Martin Cohen records the details of two cases of metastatic ophthalmia consecutive to pneumonia (*Archives of Ophthalmology*, May, 1916). The first patient, a woman, aged 32, was suffering from broncho-pneumonia. During the third week, inflammatory oedema of both upper lids was evident, and marked chemosis of the bulbar conjunctiva. The aqueous became cloudy and a yellowish vitreous reflex was seen. A small hyphaema appeared in the left anterior chamber. Three days later the patient died. Specimens taken from the vitreous revealed streptococci. The second patient was 21 years of age, and had lobar pneumonia. On admission, the right eye showed conjunctival injection, sluggish pupil and discolouration of the iris, the anterior chamber being filled with a fibrinous exudate. A well-marked hypopyon appeared later. The patient died three days after admission. Fluid drawn from the vitreous contained pneumococci.

(93) Koch-Weeks' Bacillus Conjunctivitis.

Hideyo Noguchi and Martin Cohen believe that the cell inclusions discovered by Prowazek in trachoma, and considered by him its causal agent, produce an independent conjunctival disease which may be called "cell inclusion conjunctivitis" (*Archives of Ophthalmology*, March, 1916). They had ten of these cases under treatment, which were examined weekly by smears and cultures and found to be free from Koch-Weeks' bacilli. One of them suddenly developed acute conjunctivitis, and in conjunctival smears Koch-Weeks' bacilli, as well as epithelial inclusions were demonstrated. The acute infection spread to the other patients, as well as to 15 cases of follicular conjunctivitis, three cases of interstitial keratitis, and one of chronic dacryocystitis. Thirteen of these patients contracted the Koch-Weeks' infection. In two cases of trachoma Koch-Weeks' bacilli were discovered in cultures. In inclusion conjunctivitis, there is moderate oedema of the lids, with mucopurulent secretion; reddish translucent follicles appear in the lower palpebral conjunctiva and upper folds. Later, the upper palpebral conjunctiva takes on a brick-red colour and the characteristic granular appearance. The disease lasts about four months, and does not cause corneal complications. The treatment consisted in two-hourly irrigation with saturated boric lotion, and daily application of silver nitrate solution. Experiments on animals showed that the inclusion virus could

be transmitted to a baboon, producing conjunctivitis, but attempts to produce Koch-Weeks' conjunctivitis in rabbits and monkeys invariably failed.

LARYNGOLOGY AND OTOTOLOGY.

(94) Ozæna and Tuberculosis.

Wyatt Wingrave (*Journ. Laryng., Rhin., and Otology*, July, 1916) continues the investigation of the association of atrophic rhinitis and tuberculosis, and deals with the pathological aspect. In the early stages of the disease the turbinal tissue is swollen, and there is cellular infiltration consisting of lymphocytes, endothelial and plasma cells, but no giant cells and no surface ulceration. Later on the lymphoid elements become fewer and atrophy follows. The author shows that the lesions, like in lupus, tend to become sclerosed and to spread, but that the extension is strictly confined to the contiguous mucous membrane. A bacteriological examination has revealed that a certain acid-fast bacillus is present in every case of true ozæna. This bacillus is never found in allied conditions. It possesses close morphological and tintorial resemblance to the tubercle bacillus. He finds that Perez's cocco-bacillus is an occasional attendant, but does not stand in causal relationship to the disease. Inoculation tests with the associated acid-fast bacillus were undertaken at the Lister Institute, and the lesions produced in guinea-pigs were found to be indistinguishable from tuberculosis. In spite of the fact that the bacilli cannot be demonstrated in the tissues of atrophic rhinitis, and that this form of disease has not been reproduced in experimental animals on inoculation with pure cultures, he holds the opinion that ozæna is closely related to tuberculosis, and that its subjects are purveyors and distributors of an organism which is probably a variety of the tubercle bacillus.

(95) Carcinoma of the Hypopharynx.

W. Mollison describes an operation for the removal of carcinoma of the hypopharynx with plastic restoration of the lumen which he performed on a young woman (*Journ. of Laryng., Rhinology and Otology*, April, 1916). The symptoms had been noted for four months, and consisted in dysphagia of gradual onset, hyper-secretion of saliva and a characteristic thickness of the voice, due to a collection of saliva about the upper aperture of the upper pharynx and larynx. An ulcer was found to occupy the whole circumference of the hypopharynx, from the lower part of the arytenoids to below the level of the cricoid cartilage. An incision was made to the right of the middle line, from the hyoid bone to the suprasternal notch. From the upper end a second incision was carried along the hyoid bone to the anterior border of the sterno-mastoid. The platysma was then reflected and the carotid triangle exposed. The carotid vessels were separated from the pharynx and the fascia over the

carotid triangle sutured to the pre-vertebral fascia. The great cornu of the hyoid bone and the right ala of the thyroid cartilage were removed. The superior laryngeal nerve was found and avoided. The pharynx was opened by a vertical incision at the level of the upper part of the thyroid ala, and the ulcer, with a quarter inch border of apparently normal mucous membrane, was excised. A skin flap was prepared and sutured to the posterior edge of the mucous membrane, so that it lay over the carotid triangle. The original incision was closed, and a rubber tube passed through the mouth into the stomach. The patient did well after the operation and three weeks later the tube was removed. Fluids and semi-solids could be swallowed with comfort if a pad were held over the neck wound. Later a further operation was undertaken to complete the lumen of the gullet by turning in the skin flap. The base of the flap over the sterno-mastoid was divided and the skin freed, to allow the edge to be turned forwards and inwards, and to be fastened to the anterior edge of the mucous membrane strip. The new pharynx was rendered watertight, and a rubber tube was allowed to remain *in situ* for three days. The patient was able at a later date to swallow like a normal person.

(96) Submucous Resection of the Septum in Children.

C. H. Hayton (*Journ. of Laryng., Rhinology and Otology*, April, 1916) has undertaken an investigation into the results obtained of submucous resection of the nasal septum in children. There appears to be some doubt as to the advisability of performing this operation before the age of puberty. He deals with a series of 73 cases. In some of these cases he was able to make a full examination of the ultimate condition, while in others his information was obtained by letter. The operation had been performed during the seven years from 1908 to 1914. In 92% of those traced there was evidence of marked improvement in the general health and nasal breathing. A certain amount of physical deformity, usually of the nature of a broadening or flattening of the nose, was present in about one-third of the cases. He had, however, no means of ascertaining the amount of deformity present before the operation. This deformity could be remedied by paraffin injections.

(97) Tuberculin in Atrophic Rhinitis.

John McKeith (*Journ. Laryng., Rhin. and Otology*, June, 1916) states that, before applying tuberculin for therapeutic purposes in atrophic rhinitis, all his patients were tested by Camac Wilkinson's method. He gives a full description of the method. In all his cases but one a positive reaction to tuberculin was obtained. The serum of the patient who did not react to tuberculin gave a positive reaction in the Wassermann test. The author then describes his method of treatment, which he divides into three phases. In

the first he injects Perlsucht original tuberculin in gradually increasing doses, with a maximum of 1 c.cm. In the second he injects Perlsucht tuberculin and also works up to 1 c.cm., and in the third stage he uses Koch's original tuberculin, rapidly increasing the dose up to 1 c.cm. Throughout the whole course of treatment the temperature is measured four times daily. The course usually occupies from six to nine months, and is interrupted, restrained or pushed according to the temperature, weight and general condition of the patient and to the effect produced by each dose. With regard to dosage, he states that no hard-and-fast rule can be followed. He attempts to produce a mild local, general and focal reaction after each dose. He tests the patients again about three months after the first course of treatment, and if a positive reaction ensues, recommends a second course of treatment. No further treatment is instituted if the reaction proves negative. The author publishes the histories of cases treated by him by this method, and appends a summary of results. He concludes his contribution by stating that the results obtained from the experimental treatment of atrophic rhinitis with tuberculin have confirmed him in the opinion expressed at the annual meeting of the British Medical Association at Brighton in 1913 that atrophic rhinitis is a tubercular affection.

(98) The Treatment of Hay Fever.

Harold Wilson (*Laryngoscope*, June, 1916) gives an account of the treatment of 24 cases of hay fever with pollen solution and of 22 cases with calcium chloride. The author gives a short description of the symptoms and course of hay fever, and discusses briefly its immediate causation. He describes the preparation of the pollen solution from the gathering of the pollen to the extraction of the protein. The various methods of extraction are discussed, and several experiments are recorded which have been undertaken with a purpose of comparing these various methods. He has injected small doses of the pollen solution, beginning with two or three units, and gradually increasing the dose to 1,000 units. The pollen unit devised by Noon represents the soluble protein contained in 0.000001 gramme of dry pollen. He states that no definite uniformity in regard to the dosage of pollen solution exists, and that it appeared at present as if the doses decided upon were purely arbitrary. In the second part of his paper he discusses the treatment of hay fever by the administration of calcium chloride. In two of his patients it interfered with the comfort of the individuals, but with these exceptions no contra-indications to its use were discovered. After dealing with the mode of action and contrasting the results obtained by the two methods he concludes that he has not obtained the same successful results with pollen solution as other observers claim to have had, and that he did not get as good results with it as with calcium chloride.

British Medical Association News.

SCIENTIFIC.

A meeting of the Victorian Branch was held at the Medical Society Hall, East Melbourne, on July 5, 1916, Dr. A. V. M. Anderson, the President, in the chair.

Dr. A. Norman McArthur read a paper on "Fibrosis Uteri" (see page 199).

Dr. R. H. Morrison read a paper on "Salpingitis." It is proposed to publish this paper in a subsequent issue.

Microscopical sections were demonstrated after these two papers had been read. At the conclusion of Dr. McArthur's paper the author remarked that Dr. Bull, after looking at the specimens, had enquired whether he had investigated the condition of the endometrium. He admitted that he had not done so. There were distinct vascular changes in the endometrium, and a study of these changes would contribute to an understanding of the cause of haemorrhage occurring from a fibrotic uterus, even after frequent curetting.

Dr. R. J. Bull explained that he had not paid any special attention to the subject under discussion. The first pathological specimen he had received after reading the notice-paper for the evening was the uterus of a woman, aged 40 years, who had suffered from repeated haemorrhages, and had nearly died from this cause. Hysterectomy had been performed. The uterus was not appreciably enlarged. Its body appeared to be intersected by fibrous bands. He had noticed that the blood-vessels were standing out and had thickened walls. There was an advanced condition of fibrosis. This represented a later stage of fibrosis than that seen in the specimens demonstrated by Dr. McArthur under the microscope. In the latter, greater round-cell activity was seen, and this was a mark of the earlier or more active stage of that disease. In regard to the endometrium, the speaker considered it probable that the vascular changes in the uterine wall would be associated with changes in the endometrium, leading to haemorrhage. The condition of the blood-vessels in the endometrium was interesting. Instead of being small, the vessels were very dilated, and were lined by one or two layers of spindle cells. Once bleeding started he failed to see what would stop it. He had no reason to suppose that the case which he had examined was syphilitic. If it were a manifestation of arterio-sclerotic changes, the records of the blood-pressure would be interesting. He thought that it would be of value to obtain further information in regard to the type of person affected by this change.

Dr. Rothwell Adam said that *fibrosis uteri*, or, as it was usually termed, perimetritis, and, in its later stage, hyperplasia of the uterus, had been the bugbear of his practice for many years. The fibrosis in this disease was probably due to a number of causes. Many years when he was at the Women's Hospital a woman came in for operation. She was curedt and a sample of the scrapings were sent to Dr. Bull for examinations. Though there was some delay in the return, it arrived before the date fixed for operation. The tissue had been found to be definitely syphilitic. The uterus was not removed, but the patient was put on anti-syphilitic treatment, and the haemorrhage ceased. She left the Hospital apparently well, and the haemorrhage did not recur as long as the patient was kept under observation. She was just approaching the menopause which was a time when fibrosis usually occurred. It seemed usually to affect parous women.

Dr. Frank A. Nylasay remarked that there was a considerable variation in the size of the specimens shown. His first information on the subject had been derived from Bland Sutton's description. Bland Sutton had recorded that in all cases of fibrosis the uterus was enlarged. Some of the uteri they had seen that evening were normal in size, and some were smaller than normal. Bland Sutton had also pointed out that there was a remarkable relationship between the uterus and the changes in the walls of the ventricles of the heart in advanced syphilis. In cases such as those under discussion it would be useful to have a Wassermann test carried out. Bland Sutton had advocated the complete removal of the uterus.

Dr. Allen Robertson stated that, in Cullen's opinion, *fibrosis uteri* was due to a hyperplastic condition of the

endometrium. He had performed curettage again and again, and had been compelled ultimately to do hysterectomy. Cullen had met with cases in persons as young as 15 and 16 years of age. One case in the speaker's own experience was that of a woman aged between 37 and 39 years, who had been cured many times. She had suffered from haemorrhage for many years. The uterus had been removed, and she was now as robust as any woman in Melbourne. Bonney, writing in Chayce's *Surgery*, had expressed the opinion that the condition was usually of secondary origin.

Dr. A. V. M. Anderson stated that in nephritis substances derived from the degeneration of the kidneys had been found in the blood. He asked Dr. McArthur to inform him of the condition of the blood-pressure in cases of fibrosis under his care.

In reply, Dr. McArthur stated that in four of the six patients from whom the specimens had been obtained the blood-pressure had been measured. It was normal in all four cases. The majority of the patients he had seen had come into the hospital hurriedly, and had departed as quickly, and, consequently, the blood-pressure had not been recorded. In future, he would see that it was taken. He had not had a Wassermann test carried out in any of the cases. This was due to the fact that a considerable delay would be occasioned, and would cause the patient to wait in a general hospital for the result. He intended, however, that this should also be done, whenever it was found practicable. There was a multiplicity of causes of fibrosis, and he agreed that syphilis was probably one of them. Arguing from analogy, he had come to the conclusion that fibrosis was produced by some chronic inflammatory condition. For example, all leucorrhœas were caused by some definite bacterium, which led to an inflammatory condition of the endometrium. If this infective chronic inflammatory condition continued long enough it was reasonable to suppose that it might reach the deeper muscular wall of the uterus. By analogy it would be realized that a fibrosed uterus might be enlarged, normal or small, according to whether the condition was early, of long standing, or of very long standing. Dr. McArthur expressed his indebtedness to Dr. Bull for suggesting to him a line for future investigation.

MEDICO-POLITICAL.

A meeting of the Council of the Victorian Branch was held in the Medical Society Hall, East Melbourne, on August 30, 1916, Dr. Anderson, the President, in the chair.

Dr. R. R. Stawell was elected a member of the Council, in place of Dr. Latham, who had resigned on his appointment to No. 14 Australian General Hospital. Mr. G. A. Syme was nominated for appointment by the Governor-in-Council as a Trustee of the Medical Society Hall, in place of Dr. Jas. Jamieson (deceased). A letter was received from the Tasmanian Branch, stating that complaints had been received that well-to-do patients had been admitted into a public hospital, and had paid fees for operation and maintenance. The Board of Management had stated that the practice was in conformity with that of all the general hospitals throughout Australia. The Branch desired to know whether that statement was correct, as far as Victoria was concerned. The Council replied that it had received the same complaints with regard to the practice in Victoria. In the Report of the Inspector of Charities for Victoria of June 30, 1915, it was pointed out that "Almost every hospital had been guilty of admitting patients who ought not to have been there, because they were able to pay for outside treatment, and every person in the district knew that they ought not to have been admitted." It was pointed out by the Council that at Government-aided hospitals patients sign a declaration stating either that they are destitute or were not able to pay full medical fees. The Council confirmed the opinion expressed in the leading article of one of the Melbourne daily newspapers: "The public hospitals were established, and were being maintained for one purpose only—the medical and surgical relief of indigents. It was, therefore, a rank injustice to hospital subscribers, to the medical profession and to the sick poor that any bed in a public hospital should ever be occupied by a patient possessed of means."

In regard to the question of practices left vacant by medical men who have been accepted for military service, the Council ruled that a medical practitioner was free to commence practice in a town, provided that he accepted the same arrangements as the other doctors with regard to conserving the interests of the absentee.

It had been stated by an insurance company that medical men gave certificates for life insurance for 10s. 6d. The Council advised members to adhere to the Standard Scale of Fees adopted by the Branch, copies of which could be had upon application.

It was proposed by Professor Berry that a Conference be called of Librarians of medical libraries in Melbourne, to discuss the matter of overlapping with regard to medical journals. It was thought that, by a little co-operation, the number of journals accessible to members could be greatly increased, without any additional expense to the bodies concerned. This proposal was adopted.

The Pharmaceutical Defence, Ltd., of Victoria, had obtained an opinion from the Federal Attorney-General that it would be illegal for chemists to dispense drugs of enemy origin, even when prescribed by medical practitioners. As the matter was one of great interest and importance throughout Australia, the correspondence was forwarded to the Editor of *The Medical Journal of Australia* for publication.

Mr. G. A. Syme and Dr. W. R. Boyd were elected to the Federal Committee.

A Sub-Committee was formed to take into consideration the question of placing on the walls of the Medical Society Hall an Honour Roll containing the names of all those medical practitioners in Victoria who had fallen in the present war.

Letters of sympathy were sent to the widows of Dr. Thomas Stanton and Dr. H. O. Rigby.

It was arranged that at the next monthly meeting Dr. J. F. Wilkinson should read a paper on "Starvation and Diet in Diabetes" and exhibit specimens of diabetic foods. Dr. W. R. Boyd would also show cases of tuberculous spine.

The following have been nominated for election to the New South Wales Branch:

Dr. Frank Neill Rodda, Roseville.

Dr. Guy A. Lawrence, Greenwood, Canley Vale.

Public Health.

THE HEALTH OF NEW SOUTH WALES.

The following notifications have been received by the Department of Public Health, New South Wales, during the week ending August 19, 1916:

	Metropolitan		Hunter River		Remainder		Total.
	Combined Districts.	Combined Districts.	Combined of State.	State.	State.	State.	
	Cs. Dths.	Cs. Dths.	Cs. Dths.	Cs. Dths.	Cs. Dths.	Cs. Dths.	
Enteric Fever	6	0	0	0	3	0	9 0
Scarlatina	72	1	1	0	33	0	106 0
Diphtheria	46	0	5	0	64	4	115 4
C'bro-Sp'l Menin.	6	2	0	0	4	5	10 7
Infantile Paralysis	0	0	0	0	1	0	1 0
Pul. Tuberculosis	24	15	0	2	†	0	24 17
Malaria	0	1	0	0	0	0	0 1

† Notifiable only in the Metropolitan and Hunter River Districts.

The following notifications have been received by the Department of Public Health, New South Wales, during the week ending August 26, 1916:

	Metropolitan		Hunter River		Remainder		Total.
	Combined Districts.	Combined Districts.	Combined of State.	State.	State.	State.	
	Cs. Dths.	Cs. Dths.	Cs. Dths.	Cs. Dths.	Cs. Dths.	Cs. Dths.	
Enteric Fever	7	1	0	0	0	0	7 1
Scarlatina	48	1	1	0	35	0	84 1
Diphtheria	43	3	2	0	34	1	79 4
C'bro-Sp'l Menin.	5	2	0	0	11	4	16 6
Pul. Tuberculosis	30	6	2	0	†	0	32 6

† Notifiable only in the Metropolitan and Hunter River Districts.

THE HEALTH OF VICTORIA.

The following notifications have been received by the Department of Public Health, Victoria, for the week ending August 20, 1916:

	Metro- politan. Cs. Dths.	Rest of State. Cs. Dths.	Totals. Cs. Dths.
Diphtheria	81	1	42 2 123 3*
Scarlatina	14	0	10 0 24 0
Enteric Fever	3	1	3 0 6 1
Pulmonary Tuberculosis	13	9	4 22 13
C'bro-Spinal Meningitis	12	—	13 25 —

The following notifications have been received by the Department of Public Health, Victoria, during the week ending August 27, 1916:

	Metro- politan. Cs. Dths.	Rest of State. Cs. Dths.	Totals. Cs. Dths.
Diphtheria	65	1	27 2 92 3
Scarlatina	17	0	11 3 28 3
Enteric Fever	0	0	0 1 0 1
Pulmonary Tuberculosis	22	8	6 9 28 17
C'bro-Spinal Meningitis	11	—	10 21 —

INFECTIVE DISEASES IN QUEENSLAND.

The following notifications have been received by the Department of Public Health, Queensland, during the week ending August 19, 1916:

Disease.	No. of Cases.
Enteric Fever	9
Pulmonary Tuberculosis	4
Scarlatina	8
Diphtheria	28
Cerebro-Spinal Meningitis	6
Varicella	23
Puerperal Fever	3
Erysipelas	3
Malaria	19
Ankylostomiasis	2

The following notifications have been received by the Department of Public Health, Queensland, during the week ending August 26, 1916:

Disease.	No. of Cases.
Diphtheria	19
Pulmonary Tuberculosis	22
Varicella	28
Scarlatina	11
Erysipelas	1
Enteric Fever	9
Malaria	1

INFECTIVE DISEASES IN SOUTH AUSTRALIA.

The following notifications have been received by the Central Board of Health, Adelaide, for the week ending August 12, 1916:

	Adelaide. Cs. Dths.	Rest of State. Cs. Dths.	Totals. Cs. Dths.
Morbilli	19	0	130 0 149 0
Pertussis	7	0	33 0 40 0
Diphtheria	5	2	22 2 27 4
Pulmonary Tuberculosis	0	2	13 0 13 2
C'bro-Spinal Meningitis	0	1	2 0 2 1
Scarlatina	0	0	2 0 2 0
Puerperal Fever	0	0	1 0 1 0
Erysipelas	0	0	1 0 1 0

The following notifications have been received by the Board of Health, Adelaide, during the week ending August 19, 1916:

	Adelaide. Cs. Dths.	Rest of State. Cs. Dths.	Totals. Cs. Dths.
Morbilli	26	0	201 0 227 0
Pertussis	7	1	51 1 58 2
Diphtheria	4	2	20 3 24 5
Pulmonary Tuberculosis	2	3	6 4 8 7
C'bro-Spinal Meningitis	1	4	5 1 6 5
Erysipelas	1	0	4 0 5 0
Scarlatina	1	0	3 0 4 0
Enteric Fever	1	0	0 0 0 0

INFECTIVE DISEASES IN WESTERN AUSTRALIA.

The following notifications have been received by the Department of Public Health, Western Australia, for the week ending August 12, 1916:—

	Metro- politan Cases.	Rest of State. Cases.	Totals. Cases.
*Enteric Fever	1	0	1
Diphtheria	6	2	8
Scarlatina	3	0	3
Pulmonary Tuberculosis	5	1	6
Septicæmia	1	0	1
Cerebro-Spinal Meningitis	1	0	1

THE HEALTH OF TASMANIA.

The following notifications have been received by the Department of Public Health, Tasmania, for the week ending August 19, 1916:—

Disease.	Hobart. Cases.	Lau- ceston. Cases.	Country. Cases.	Whole State. Cases.
Diphtheria	4	0	13	17
Enteric Fever	1	0	0	1
Pulmonary Tuberculosis	3	0	3	6
C'bro-Spinal Meningitis	2	0	1	3
Scarlatina	0	2	7	9

The following notifications have been received by the Department of Public Health, Hobart, during the week ending August 26, 1916:—

Disease.	Hobart. Cases.	Lau- ceston. Cases.	Country. Cases.	Whole State. Cases.
Diphtheria	5	1	17	23
Pulmonary Tuberculosis	3	0	2	5
Scarlatina	0	0	1	1
C'bro-Spinal Meningitis	0	0	1	1

SMALL-POX IN NEW SOUTH WALES.

The following notifications have been received by the Department of Public Health, New South Wales, during the week ending August 27, 1916:—

Country—Narrabri	Cases.
	4

PROHIBITED DRUGS.

The following letter has been received from the Secretary of the Pharmaceutical Defence, Limited, by the Council of the Victorian Branch of the British Medical Association. At the request of the Council we reproduce from *The Medical Journal of Australia*, of June 3, 1916, a list of synonyms for drugs patented by enemy subjects. It will be remembered that the Federal Government has issued a proclamation making it an offence, punishable by a fine of not exceeding £500, for any person in the Commonwealth to sell an article known under a name which has been patented by a subject of the enemy.

Dear Sir,—

With regard to the prohibition of certain drugs of enemy origin by the Federal Government, I am requested to bring under the notice of your Council an official ruling by the Commonwealth Attorney-General that pharmacists are acting illegally in dispensing any such drugs, even if they are ordered or prescribed by a medical practitioner.

Pharmacists are therefore placed in the position of being required (under heavy penalties) to refuse to dispense or sell drugs of enemy origin under any circumstances.

The Council of the Association would be glad if you could give this ruling publicity amongst the members of the British Medical Association in Australia, and ask for their co-operation in the matter.

I am also desired to state that several practitioners are meeting the case by using prescription forms on which are printed "Substitute drugs of British origin where necessary," or words to that effect.

As the prohibition referred to is of considerable importance to prescribers, owing to the large number of German drugs and chemicals affected, it is suggested

that the effect of the decision above referred to should be made known as widely as possible.

I enclose herewith copies of the correspondence on the subject.

Yours faithfully,

C. L. BUTCHERS,
Secretary.

August 24, 1916.

Pharmaceutical Defence, Limited.

Melbourne,

19th April, 1916.

The Honourable F. Mahon,
Acting Federal Attorney-General,
Federal Offices, Melbourne.

Dear Sir,—

Referring to the proclamation suspending certain Enemy Trade Marks, I have been asked by several pharmacists as to their position if a medical practitioner orders any of the drugs included in the Enemy Trading Proclamation.

For instance, such drugs as Antipyrine, Heroin, Veronal, etc., are still being frequently ordered by doctors, and pharmacists are in a quandary as to what attitude they should take in dispensing these prescriptions.

The matter is rather an important one to chemists throughout Australia, and I should be glad, therefore, if you would kindly give me an official reply on the subject as early as convenient.

Yours faithfully,

C. L. BUTCHERS,
Secretary.

Commonwealth of Australia.

Attorney-General's Department,

Melbourne, 24th July, 1916.

Sir,—

Referring to your letter to the Acting Attorney-General of the 19th April last, I have the honour, by direction, to inform you that goods bearing trade marks, the registration of which has been suspended by the notifications appearing in the *Commonwealth Gazettes* of 12th January and 23rd February last, cannot be sold* unless they are the manufacture of a person who has applied for and secured the suspension of the trade mark or marks borne by the goods in his favour.

I have the honour to be,

Sir,

Your obedient servant,

R. R. GARRAN,
Secretary.

The Secretary,

Pharmaceutical Defence, Ltd.,

Melbourne.

List of Synonyms for Drugs Patented by Enemy Subjects.

Albutactin	..	..	..	Several Local and French Mineral Waters
Apenta	..	..	..	Any Iodoform Substitute
Aristol	..	..	..	Acetosal
Aspirin	..	..	..	Phenazone
Antipyrin	..	..	..	Hexamine (B.P.); Formin
Cystopurin	..	..	..	Several British Preparations, Formalin and Mint Lozenges
Formamint	..	..	..	Hexamine (B.P.)
Helmital	..	..	..	Aceto-Morph. Hyd.
Heroin	..	..	..
Jothion	..	..	..
Jodipin	..	..	..
Lysol	..	..	..	Liq. Cresol Saponatis (B.P.)
Migrainine	..	..	..	Phenazone Caffeine Cit.
Mesotan	..	..	..
Neosalvarsan	..	..	..
Protargol	..	..	..	Silver Proteinate
Perhydrol	..	..	..	Hydrogen Peroxide
Pebeo Tooth Paste	..	..	..	Several Local Preparations
Sanatogen	..	..	..	Ceregen, Neurogen, etc.
Salvarsan	..	..	..	Galy, etc.
Trional	..	..	..	Methyl-Sulphonate
Veronal	..	..	..	Barbitone (B.P.)

* "Sold" is interpreted as including "dispensed."—C.L.B.

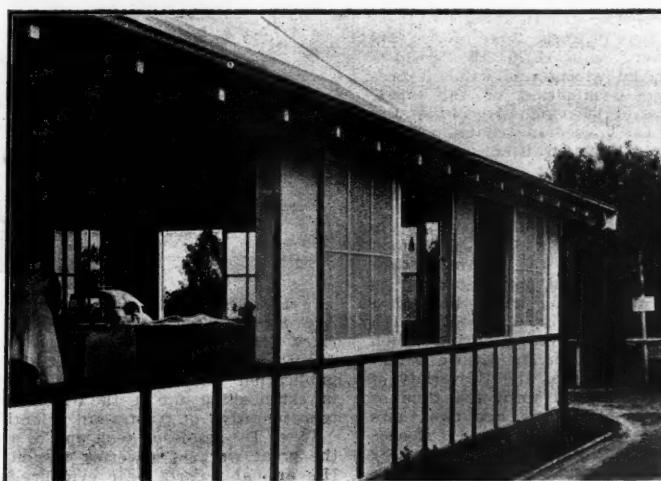
VERANDAH WARDS AT THE CAMDEN COTTAGE HOSPITAL.

The extension of the principle of treating patients in the open air for diseases other than tuberculosis was, as far as we are aware, first applied to hospitals by Dr. P. Boobbyer, of Nottingham. Dr. Boobbyer utilized farm buildings, and, by constructing iron pavilions in connexion with the same, was able to provide a permanent isolation hospital, with twelve beds, at the cost of £627. The results obtained in the Nottingham Hospital have been most encouraging. We have called attention from time to time to the application of the same principle in the treatment of pneumonia.

Through the courtesy of the Minister of Public Health of New South Wales, we are enabled to reproduce two photographs illustrating the addition of two open-air wards which has been effected at the Camden Cottage Hospital. The existing verandah along the front of the building has been widened and altered; an approach has been made to each lavatory, which is used as a basin room, and which is fitted with a sink for washing basins, etc.; and two lavatories, with water flush system connected to the existing septic tank, have been constructed. The front of the Hospital has an easterly aspect. The verandah wards, etc., are built on brick foundations, with fibro-cement walls and iron roof. The ceilings and walls of the wards are lined with wood, while those of the basin rooms are lined with fibro-cement. The floors in the basin rooms are covered with lead. The spaces in the walls of the wards are fitted with sliding glass sashes, working on patent tracks with ball-bearing rollers. The work entailed extension of the existing drainage, water and gas systems. The extra accommodation is for nine beds, and the total cost of the alterations amounted to £488 11s. 2d.



Camden Cottage Hospital, 10th June, 1916.



Female Open-Air Ward, Camden Cottage Hospital, 10th June, 1916.

The following notice has appeared in the *Commonwealth of Australia Gazette*, No. 110, issued on August 24, 1916:—

In pursuance of the powers conferred upon me by the "Post and Telegraph Act, 1901-1916," I hereby order and direct that on and after this date any postal article received at a Post Office in the Commonwealth addressed to—

Kalma the Healer, Beach Road, Brighton Beach, Vic.;

A claim for £1,000 damages in respect of alleged unskillful treatment of an impacted Colles' fracture was heard in Sydney by Mr. Justice Ferguson and a jury from August

Medico-Legal

A claim for £1,000 damages in respect of alleged unskillful treatment of an impacted Colles' fracture was heard in Sydney by Mr. Justice Ferguson and a jury from August

28, 1916, to August 30. The plaintiff was a Mrs. Selena Ann Bradbury and the defendant Dr. William Johnstone Binns. According to her account, the plaintiff slipped on January 15, 1916, when alighting from a tram at Kogarah, and fell on to the palm of her left hand. She went to the Kogarah Cottage Hospital and was attended by Dr. Binns, who diagnosed a fracture and put the arm up in splints. At first she attended at the Hospital as an out-patient, and later attended at Dr. Binns' rooms. About the middle of March she consulted another doctor. She claimed that the hand was practically useless, and attributed this to negligence and carelessness on the part of the defendant.

Dr. Binns gave evidence to the effect that he diagnosed a Colles' fracture, and made an unsuccessful attempt to reduce the impaction. He therefore put the arm into splints and paid considerable attention to the measurement and application. Later he shortened the splint by $\frac{1}{4}$ inch to enable Mrs. Bradbury to use her fingers more freely. He had applied massage to the hand and arm. He claimed that his treatment was correct.

Sir Herbert Maitland stated that he had seen the patient with Sir Alexander MacCormick in May, and had examined the arm. In view of the patient's age, which was over 50, he considered the method adopted by Dr. Binns was correct. There was usually considerable deformity in a Colles' fracture.

Sir Alexander MacCormick gave evidence in a similar strain, and expressed the opinion that if hot-air and massage were applied the plaintiff might regain a useful working arm.

Dr. Herschel Harris spoke of the radiographic control of fractures of this kind, and expressed the opinion that Dr. Binns' treatment had been correct.

Other evidence was given, and after His Honour had summed up the jury returned a verdict for the defendant.

Vis Vitæ Herbal Remedy Company, Geelong or Brighton, Vic.;
 Ker Nels Remedy Company, Geelong or Brighton, Vic.;
 Victorian College of Sciences, Geelong or Brighton, Vic.;
 Jno. Craig-Whitfield, Geelong or Brighton, Vic.;
 The Self-Help Publishers, Geelong or Brighton, Vic.;
 J. J. Whitfield, Geelong or Brighton, Vic.;
 J. Craig, Geelong or Brighton, Vic.;
 Waymor Company, 7 Rawson Place, Sydney;
 Tracey Miller, 7 Rawson Place, Sydney;
 The Federal Collection Agency, Rawson Place Sydney, or Box 76, G.P.O., Sydney;
 by their own or any other names, fictitious or assumed, or to any agent or representative of theirs, shall not be registered or transmitted or delivered.

Dated this twenty-fourth day of August, 1916.

WILLIAM WEBSTER,
 Postmaster-General.

We have been requested by the Société Nationale de Chirurgie de Paris to announce that a prize of 50,000 francs has been offered for the best mechanical apparatus to replace the human hand. A generous donor, who wishes to remain anonymous, has offered to the Société the sum mentioned above, to be handed over to the maker of the mechanical apparatus best calculated to replace the human hand. Competitors must belong to allied or neutral nations. The competitors will be required to produce men whose arms have been amputated and who have been wearing the apparatus for at least six months. The Société de Chirurgie reserves itself the right to experiment with the apparatus in any way considered to be necessary. The selected apparatus will remain the property of its inventor. The competition will be closed two years after the end of the war. Descriptions and apparatus must be sent to M. le Secrétaire Général de la Société Nationale de Chirurgie, à Paris, 12 Rue de Seine.

Obituary.

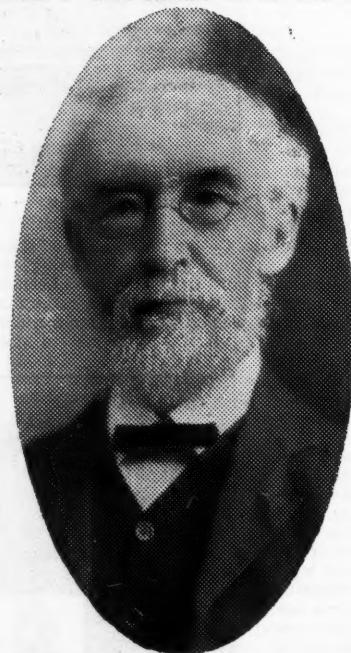
JAMES JAMIESON.

It is usually held that the span of life is three score years and ten. Few men, however, bequeath to the world a legacy in the form of lasting knowledge and valuable precept as they approach the termination of this span. Throughout the whole course of his singularly active and varied life James Jamieson has placed his contemporaries and posterity under a deep debt of gratitude to him by his constructive work and on account of the part he played in the evolution of a great university and a great city. He was born 76 years ago in Beith near Glasgow. He studied medicine at the Glasgow University, and in the year 1862 graduated as doctor of medicine. He took the degree of master of chirurgery in the following year. Two or three years later he migrated from Scotland to Australia, and settled in Warrnambool, where he had a brother engaged in commercial pursuits. He followed a practice at this place for nearly ten years, during which time he formed a close friendship with Mr. Laurie, afterwards Professor of Moral Philosophy at the University of Melbourne. This friendship continued until the time of his death. In 1877 he came to Melbourne, and two years later was appointed Lecturer on Obstetrics and Diseases of Women and Children, a position rendered vacant by the death of Dr. Laurence Joseph Martin. At this time the Medical School was 16 years of age, and its history was still in the making. One of Dr. Jamieson's earliest endeavours was to establish an outdoor maternity department in connexion with the Women's Hospital. He was farther sighted than the majority of his compeers, and, although his attempt failed, he established for himself the reputation of being a first-class organizer. In 1880 he was associated with the Dean and Dr. J. E. Neilds on the Library Committee of the Faculty of Medicine. For eight years he occupied the chair and taught obstetrics and gynaecology to his students. At the end of 1887 Dr. S. Dougan Bird resigned the chair of medicine, and Dr. Jamieson was elected in his stead. The obstetric position was

given to Dr. W. Balls-Headley. Dr. Jamieson appeared to find the teaching of medicine more congenial. Two years before he had been elected Honorary Physician at the Alfred Hospital. He held this post until his retirement from active work. In 1885 he was appointed Health Officer to the City of Melbourne, and held this position for 27 years. He gave up his teaching duties in 1907, and in 1912 passed into retirement.

Dr. Jamieson was ever dominated by an earnest desire to deal in a thorough manner with his subject, and this characteristic proved particularly valuable to his students. His natural shyness and dislike of boasting at times led to a misunderstanding of his character. For the purposes of teaching he read widely all the available British and foreign medical literature, and analysed every new theory and fresh fact before he taught them. He was largely endowed with a critical faculty. His mature experience, together with his literary and philosophical ability, raised him on a high plane of intellectual efficiency. The large number of distinguished medical practitioners who have learned their medicine from him bears testimony to his success as a teacher.

As an examiner he was fair and free from fads, and many a timid candidate had good reason to bless the kindly encouragement of "Wee Jimmie" at an oral examination.



In 1878 Dr. Neild resigned the position of Editor of the *Australian Medical Journal*. He was followed by Professor (now Sir Harry) Allen, who in turn made room for Dr. Jamieson. Our predecessor at that time was a monthly publication, and Dr. Jamieson assisted not inconsiderably in establishing for it the reputation of being a journal representative of Australian scientific medical practice.

When Dr. Jamieson took up the position of Health Officer the great work of sewerage the city had just been begun. His annual reports bear evidence of the benefit resulting from this work. He paid special attention to the slum areas of the city, and fearlessly condemned insanitary dwellings. There is no doubt that his activity in this respect has effected an extraordinary change in the hygienic condition of the city, and that Melbourne owes it to him that many danger centres have been stamped out.

Dr. Jamieson occupied the Presidential chair of the Victorian Medical Society since its incorporation with the Victorian Branch of the British Medical Association. In 1902 he was President of the Section of Medicine of the Australian Medical Congress, which was held in Hobart. On his retirement from the University and from hospital practice his past and then present students demonstrated their

respect and appreciation by providing a memorial in the form of an endowed scholarship in medicine.

Dr. Jamieson married the daughter of the late Mr. Hood, of Wollaston, near Warrnambool, who survives him. He is also survived by a son and a daughter. The latter took a most creditable degree in medicine a few years ago. One of his sons died under tragic circumstances. He was killed shortly after the opening of the Melbourne tramways on the tram-line.

GEORGE OWEN RIGBY.

The overturning of a motor-car has been the cause of the sudden termination of many valuable lives. A further addition to the already long list occurred on August 26, 1916, at Gisborne, when, as recorded in last week's issue, Dr. Rigby, of Kyneton, received injuries which were immediately fatal. His death is widely mourned throughout the district of his activities, and a large number of friends, colleagues and relatives, while extending their sympathy to his widow and children, regret the loss of a true friend.

He was educated in Kyneton, and studied medicine at the Melbourne University. In 1889 he took his degree of M.B., B.S. In 1894, when in England, he obtained the diploma of the fellowship of the Royal College of Surgeons. After graduating he served as Resident Medical Officer at the Melbourne Hospital, and subsequently he engaged in post-graduate studies in London, Edinburgh and elsewhere in Great Britain. Returning to Australia, he joined his father in his native town and later succeeded him in his practice. The record of a general practitioner in a provincial town does not lend itself readily to a cold chronicle. Events which have proved of incalculable value to patients, when committed to paper, appear commonplace, and yet a succession of these events creates an affection on the part of the community for the doctor, and a gratitude of many a husband, wife, mother or father. In Dr. Rigby's case, years of unselfish application to the practice of his profession brought with them the reward of universal admiration, respect and affection. He was a keen and active Freemason, and had many interests outside his practice; but his main ambitions were centred in his patients. He was a Medical Officer of the Kyneton Hospital, and filled the position of Health Officer of a large district. In both capacities his work was always performed conscientiously and skilfully.

Correspondence.

ASTHMA: ITS CAUSE AND TREATMENT.

Sir.—Dr. Kent Hughes says that I give away my whole position as an authority on asthma when I state that no asthmatic has a normal nose. In my article I stated that all asthma was caused by a deviation from the normal on the part of one or both nasal fossæ. To this statement I adhere—St. Clair Thompson notwithstanding. For any further account of asthma spots I must refer him to Brugemann's work, in which they were, I think, first described under the term asthmogenic points. Dr. Kent Hughes now makes a statement with which I nearly agree. He says asthma arises from a multitude of conditions, many of which we can recognize and remove. I think multitude rather over-estimates the case. Say a dozen or so causes, all of which can be recognized and removed.

He asks, can I quote any support for the treatment I advocate. The only treatment I advocate is the removal of the cause, in the determining of which only experience will help us.

Yours, etc.,

W. W. EWBANK.

2 Collins Street, Melbourne,
August 22, 1916.

Sir.—Dr. Stewart, in the *Australasian Medical Gazette*, 1908, gives details of cases treated by (1) fresh air, diet and arsenic, (2) fresh air, diet, arsenic and skipping, (3) fresh air, diet, arsenic, skipping, cautery and seton, and also cases complicated with nasal obstruction. He advocated Francis' treatment when hygienic and therapeutic measures failed. He evidently never used the cautery in the way that Francis advises, for he writes: "The vexed ques-

tion as to whether the results are merely due to the removal of an obstruction or, etc."

I think we will all agree that fresh air, dieting, arsenic and potassium iodide all have their uses in the treatment of asthma. I cannot understand Dr. Stewart's attitude towards nasal defects; his only unsatisfactory cases are those due to marked nasal defects, and in one at least the polypi recurred. I cannot go to Dalby, but if Dr. Stewart will send any cases of asthma with marked nasal defects to me I will take them into the hospital and guarantee to relieve all and to cure some.

When I was in London I found that the men most antagonistic to Francis's treatment knew least about his method. Like Dr. Stewart and the men who treated the cases mentioned by Dr. Ewbank, the cautery was used to burn the mucosa. The lightest touch with the slightest heat produces the best result. A good test is to use household sanitary paper, and practice on it until the operator can superficially char without perforating.

Dr. Ewbank attempts to revive the theory of asthma spots, which has been discarded by specialists 20 years ago. He makes no attempt at proof, but assumes an attitude of omniscience, which is generally characteristic of youth. When he has been a nose specialist another year he will perhaps realize that snipping off supposed asthma spots for months will not cure asthma in a patient with a foul antrum or with ethmoid cells full of polyp.

Statistics are dangerous tools. If he would publish the initials of his patients, with sufficient data to allow them to be recognized, we might enlighten him as to many, if not most, of his supposed cures.

The treatment of asthma is seldom so simple as to be effective by supplying a skipping-rope or excising a piece of mucosa here and there.

Yours, etc.,

W. KENT HUGHES.

22 Collins Street, Melbourne.

Books Received.

LABORATORY MANUAL IN GENERAL MICROBIOLOGY, Prepared by the Laboratory of Bacteriology, Hygiene and Pathology, Michigan Agricultural College; First Edition, First Thousand, 1916. New York: John Wiley & Sons, Inc.; London: Chapman & Hall, Ltd.; Demi Svo., pp. 418. Price, 10s. 6d.

NOTES ON THE CAUSATION OF CANCER, by the Hon. Rollo Russell, with a Preface by Dr. Dawtry Drewett, 1916. London: Longmans, Green & Co.; Sydney: George Robertson & Co., Pty., Ltd.; Demi Svo., pp. 116. Price, 3s. 6d.

Proceedings of the Australasian Medical Boards.

TASMANIA.

Dr. John Henry Raymond McCutcheon has been registered under the provisions of "The Medical Act, 1908," as a duly qualified medical practitioner.

Medical Appointments.

Dr. W. S. Laurie has been appointed Officer of Health for Camberwell City, Victoria, during the temporary absence of Dr. Basil Kilvington.

Dr. D. Crombie has been appointed Officer of Health for the Western Division of the Minhamite Shire, Victoria, in place of the late Dr. C. A. Stewart.

Dr. Harold Rischbieth has been appointed Physician to the Night Clinic Department of the Adelaide Hospital.

Dr. Henry Marco James Halloran has been appointed Acting Honorary Assistant Physician to the Adelaide Hospital, in place of Dr. Duguid (resigned).

The following appointments have been made by the Minister for Trade and Customs: To be Quarantine Officers at the places shown: Dr. A. R. Haynes, Broome, Western Australia; Dr. T. J. Elliott, Derby, Western Australia; Dr. E. Paget Thurston, Busselton, Western Australia; Dr. C. G. Thorp, Onslow, Western Australia; Dr. L. J. Pellew, Port Augusta, South Australia; C. E. Gill, D.V.S., as a Quarantine Officer for Animals, Queensland.

The following Quarantine Officers have been authorized to administer oaths or affirmations and to take declarations,

as provided in Section 86 (e) of the Quarantine Act, 1908-1915: Dr. P. T. Cherry, Dr. T. Wilson, Dr. H. Priestley, Dr. E. Humphrey.

The authorization of the following Quarantine Officers to administer oaths, etc., under the Quarantine Act has been cancelled: Dr. H. F. Martell, Dr. C. C. Magee, Dr. T. M. Donovan, Dr. H. R. Maclean, Dr. S. McClintock, Dr. J. W. Hope, Dr. W. B. Nisbet.

The cancellation of the appointments of the following Quarantine Officers has also been announced: Dr. J. I. Moore, Queensland; Dr. J. B. Clarkson, Queensland; Dr. G. Knowles (Deputy Quarantine Officer), Cairns; Dr. M. B. Johnston (Deputy Quarantine Officer), Rockhampton; Dr. E. Leavy, Innisfail; Dr. H. E. Dunstan, Port Augusta, South Australia; C. Woolnough (Assistant Quarantine Officer), Port Pirie; Dr. R. C. E. Atkinson, Western Australia; Dr. P. H. Nutting, Busselton; Dr. J. C. Sheldene, Balla Balla; Dr. G. A. I. Mackay, Denham; Dr. J. F. O'Brien, Karridale; Dr. C. G. Thorpe, Onslow; Dr. E. J. Gurdon, Derby; Dr. D. Hamilton (Acting Quarantine Officer), Hordart; Dr. M. J. Holmes (Deputy Quarantine Officer), Darwin; Dr. H. K. Fry, Darwin.

Medical Appointments Vacant, etc.

For announcements of medical appointments vacant, assistants, locum tenentes sought, etc., see "Advertiser," page xix.

Thursday Island Hospital, Medical Officer.

University of Melbourne, Lectureship in Histology and Human Embryology.

Government of Tasmania, Chief Health Officer, Assistant Health Officer.

Northern Territory, Medical Officer.

Medical Appointments.

IMPORTANT NOTICE.

Medical practitioners are requested not to apply for any appointment referred to in the following table, without having first communicated with the Honorary Secretary of the Branch named in the first column, or with the Medical Secretary of the British Medical Association, 429 Strand, London, W.C.

Branch.	APPOINTMENTS.
VICTORIA.	Brunswick Medical Institute. Bendigo Medical Institute. Australian Prudential Association Proprietary, Limited. National Provident Association. Life Insurance Company of Australia, Limited. Mutual National Provident Club.
(Hon. Sec., Medical Society Hall, East Melbourne.)	The F.S. Medical Assoc. Incorp., Adelaide.
QUEENSLAND.	Brisbane United F.S. Institute.
WESTERN AUSTRALIA.	Swan District Medical Officer. All Contract Practice Appointments in Western Australia.
(Hon. Sec., 230 St. George's Terrace, Perth.)	

Branch.

APPOINTMENTS.

Department of Public Instruction—New Appointments as Medical Officer, Ophthalmic Surgeon, Ear, Nose and Throat Surgeon, Physician.
Australian Natives' Association.
Balmain United F.S. Dispensary.
Canterbury United F.S. Dispensary.
Leichhardt and Petersham Dispensary.
M.U. Oddfellows' Med. Inst., Elizabeth Street, Sydney.
Marrickville United F.S. Dispensary.
N.S.W. Ambulance Association and Transport Brigade.
North Sydney United F.S.
People's Prudential Benefit Society.
Phoenix Mutual Provident Society.
F.S. Lodges at Casino.
F.S. Lodges at Lithgow.
F.S. Lodges at Orange.
F.S. Lodges at Parramatta, Penrith, Auburn, and Lidcombe.
Newcastle Collieries — Killingworth, Seaham Nos. 1 and 2, West Wallsend.
NEW ZEALAND: WELLINGTON DIVISION.
(Hon. Sec., Wellington.)

Diary for the Month.

Sept.	12.—Tas. Branch, B.M.A., Branch and Council.
Sept.	12.—N.S.W. Branch, B.M.A., Ethics Committee.
Sept.	13.—South Sydney Med. Assoc. (N.S.W.).
Sept.	14.—Vic. Branch, B.M.A., Council.
Sept.	15.—N.S.W. Branch, B.M.A., Last Day for Nomination of Two Candidates for Election of Federal Committee.
Sept.	15.—N.S.W. Branch, B.M.A., Extraordinary General Meeting.
Sept.	19.—N.S.W. Branch, B.M.A., Executive and Finance Committee.
Sept.	20.—W. Aust. Branch, B.M.A., General.
Sept.	22.—Q. Branch, B.M.A., Council.
Sept.	26.—N.S.W. Branch, B.M.A., Medical Politics Committee, Organization and Science Committee.
Sept.	27.—Vic. Branch, B.M.A., Council.
Sept.	28.—S. Aust. Branch, B.M.A., Branch.
Sept.	28.—N.S.W. Branch, B.M.A., Return of Ballot Papers for Election of Two Members of Federal Committee.
Sept.	29.—N.S.W. Branch, B.M.A., Branch (Ordinary), Election of Two Members of Federal Committee.
Oct.	3.—N.S.W. Branch, B.M.A., Council (Quarterly).
Oct.	4.—Vic. Branch, B.M.A., Branch.
Oct.	6.—N.S.W. Branch, B.M.A., Annual Meeting of Delegates of Local Associations with Council (First Day).
Oct.	6.—Q. Branch, B.M.A., Branch.
Oct.	7.—N.S.W. Branch, B.M.A., Annual Meeting of Delegates of Local Associations with Council (Second Day).

EDITORIAL NOTICES.

Manuscripts forwarded to the office of this Journal cannot under any circumstances be returned.

Original articles forwarded for publication are understood to be offered to *The Medical Journal of Australia* alone, unless the contrary be stated.

All communications should be addressed to "The Editor," *The Medical Journal of Australia*, B.M.A. Building, 30-34 Elizabeth Street, Sydney, New South Wales.